

1. The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1) as  $t \rightarrow \infty$ . It is shown that the solutions of the system (1) tend to zero as  $t \rightarrow \infty$  if and only if the matrix  $A$  is stable.

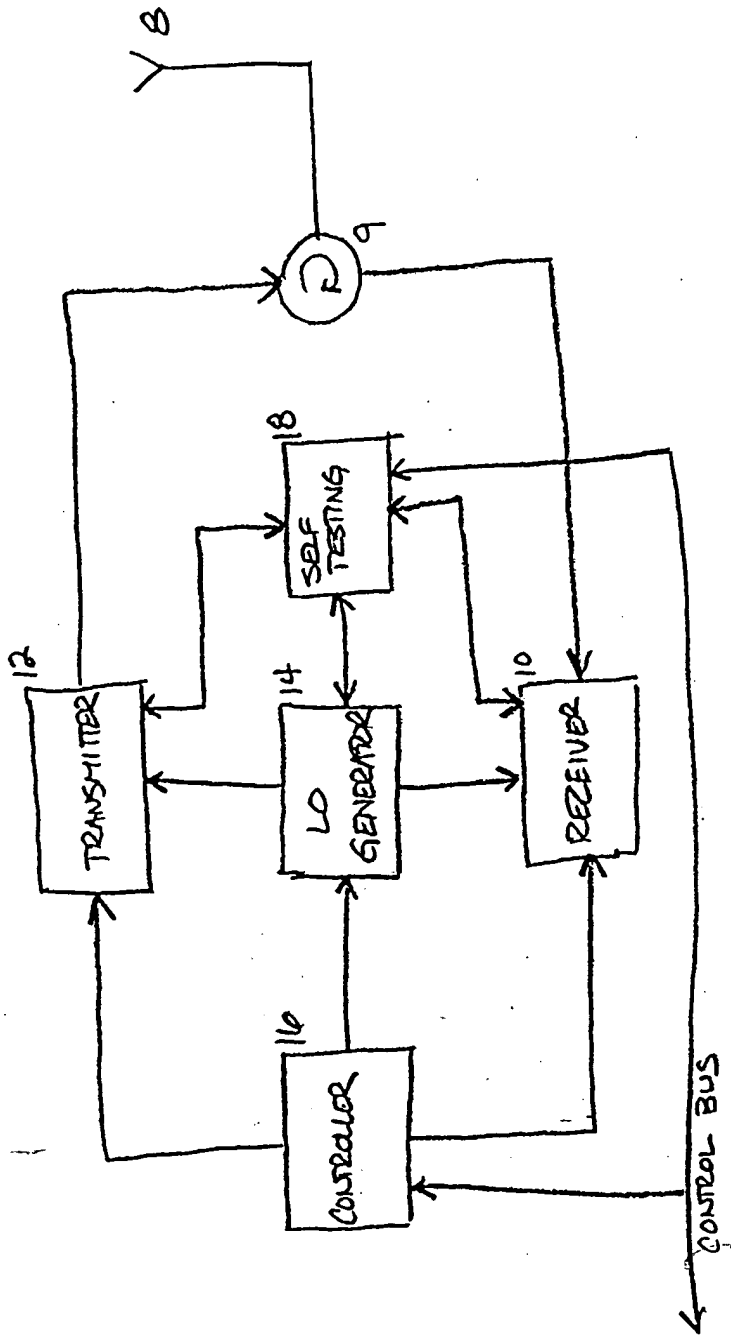


Fig. 1

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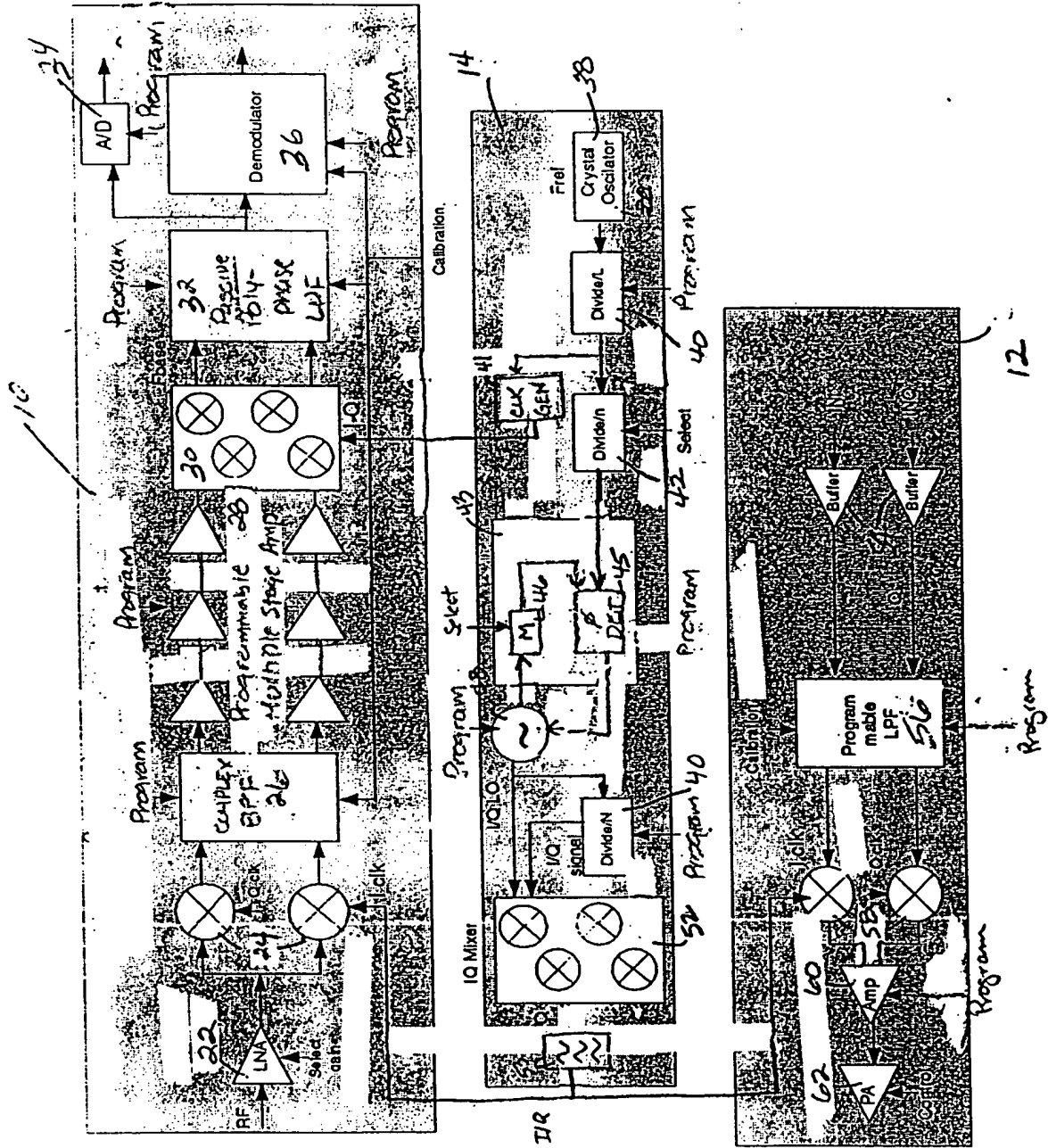
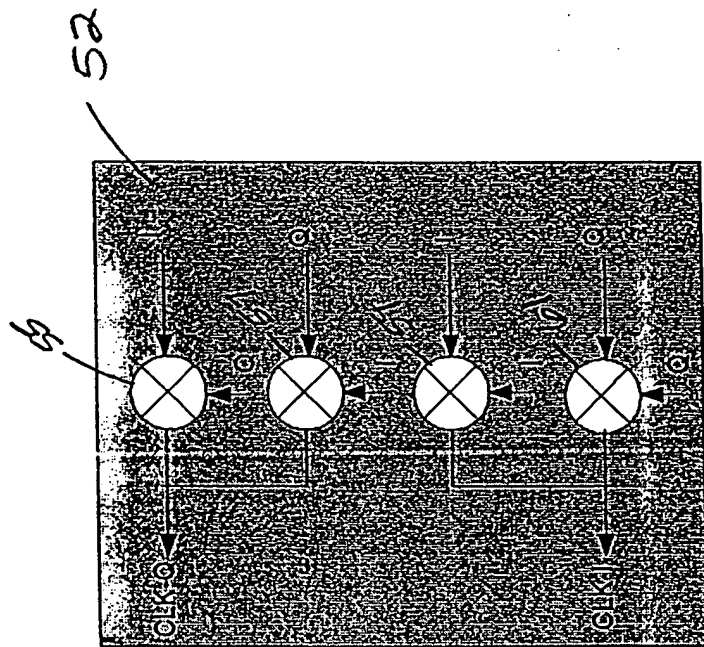


FIG. 2

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation  $f(x) = \sum_{n=0}^{\infty} a_n x^n$ , where  $a_n$  are the coefficients of the power series.



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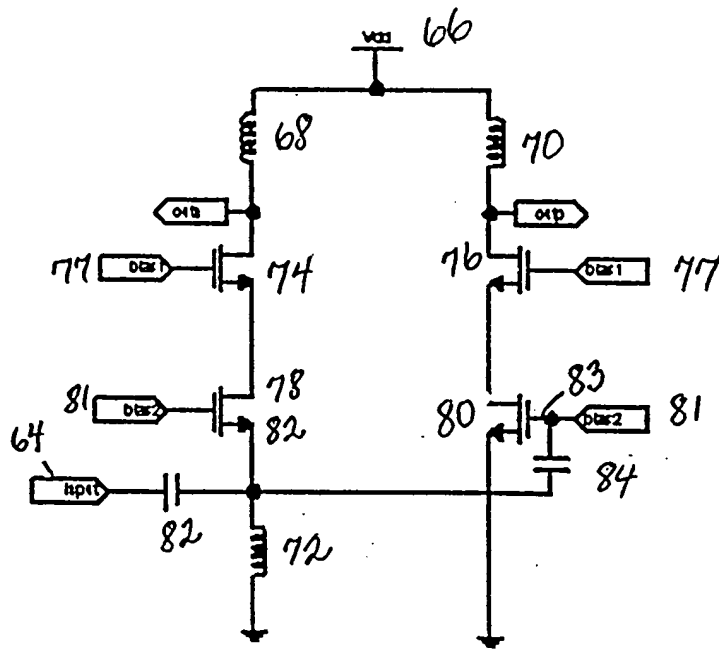


FIG. 4

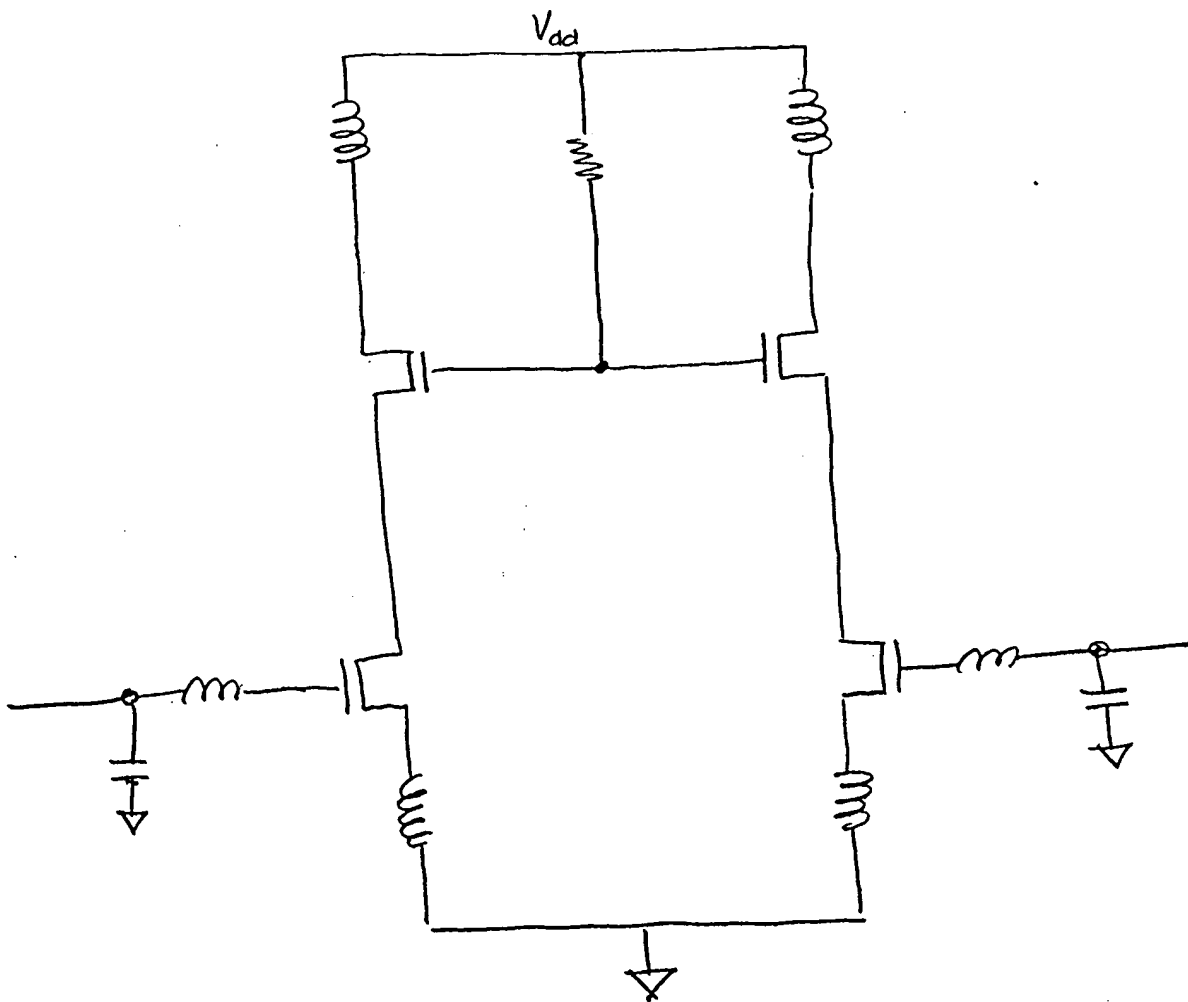
[illegible]

FIG. 4(a)

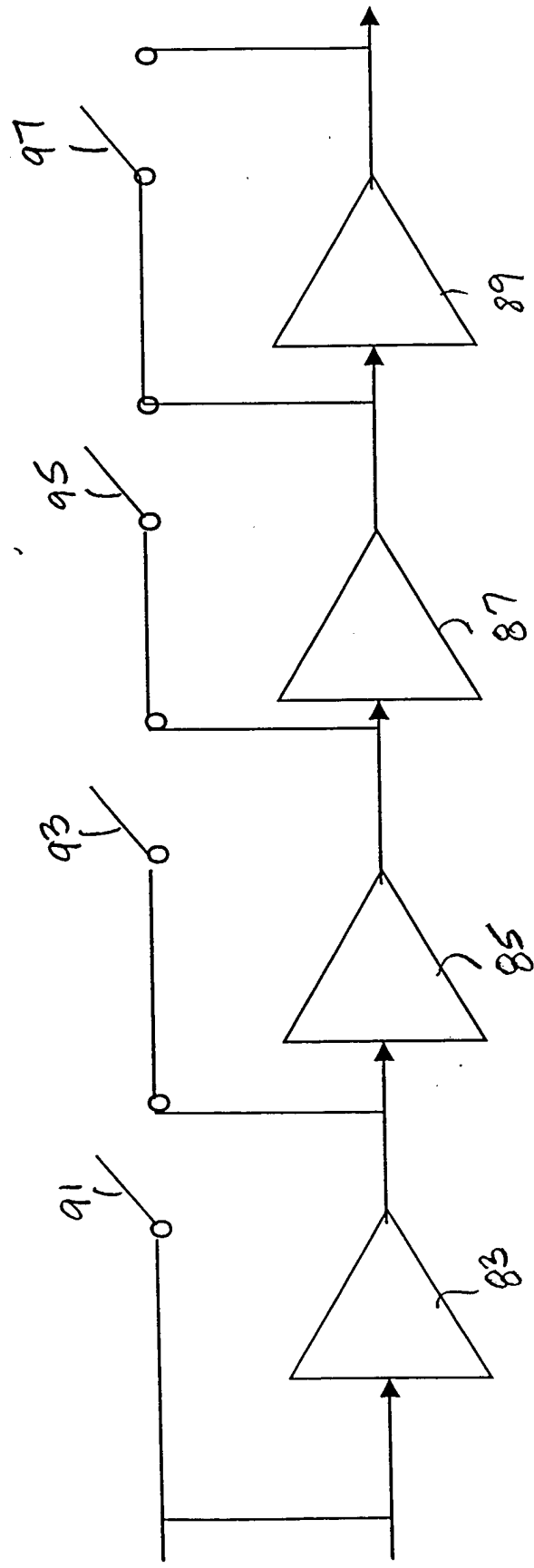


FIG. 5

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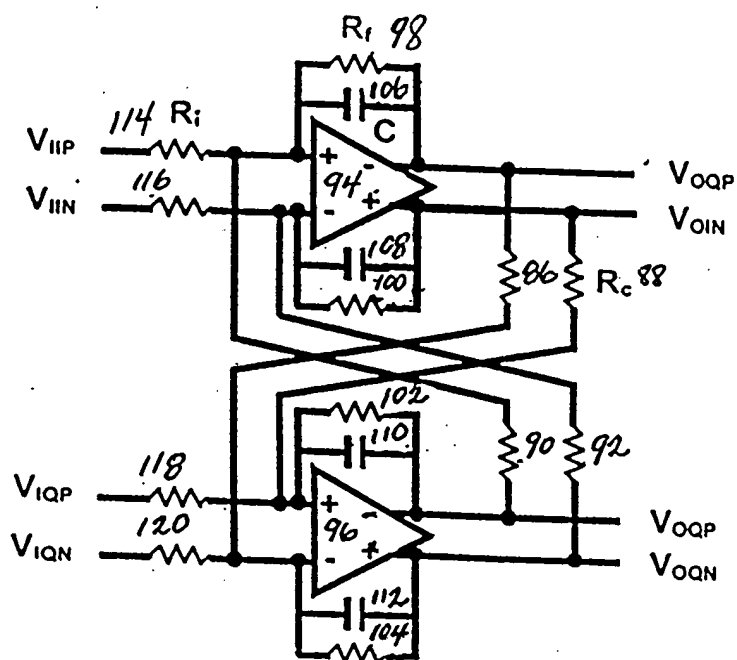


FIG. 6

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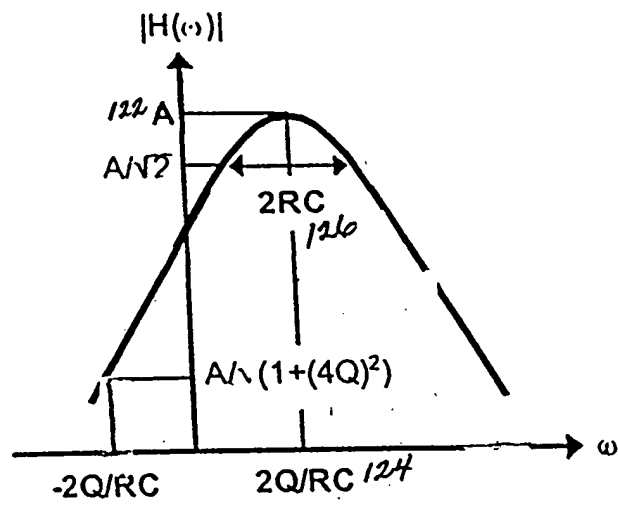


FIG. 7



Diagram for finding  $Y_i$ : A voltage source  $V$  is connected to a parallel combination of a capacitor  $C_z$  (130) and a resistor  $R_z$  (128). The output terminals are shorted to a "Virtual Ground". The current  $I$  is shown flowing into the short. The input admittance is given as  $Y_i = I/V$ .

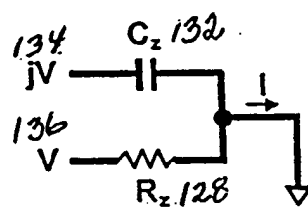


FIG. 9

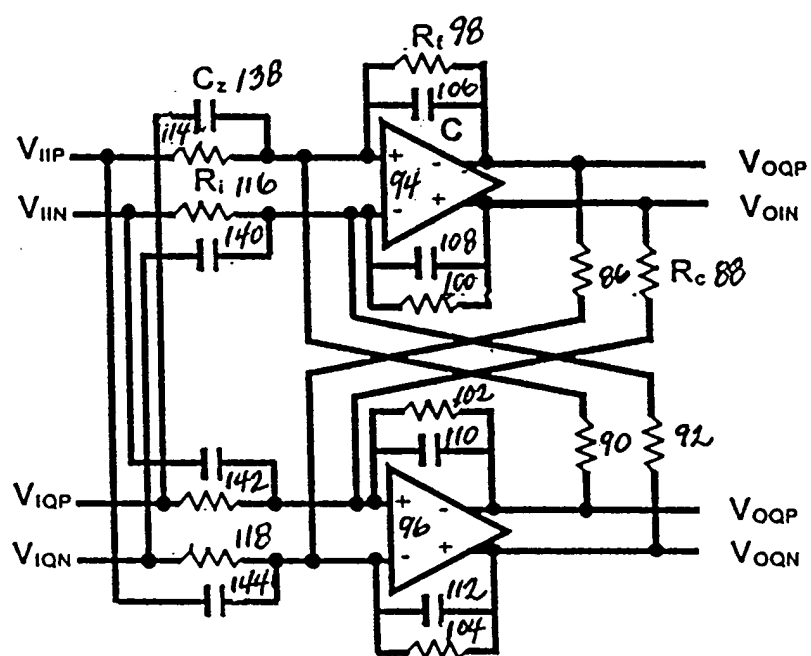
[illegible]

FIG. 10

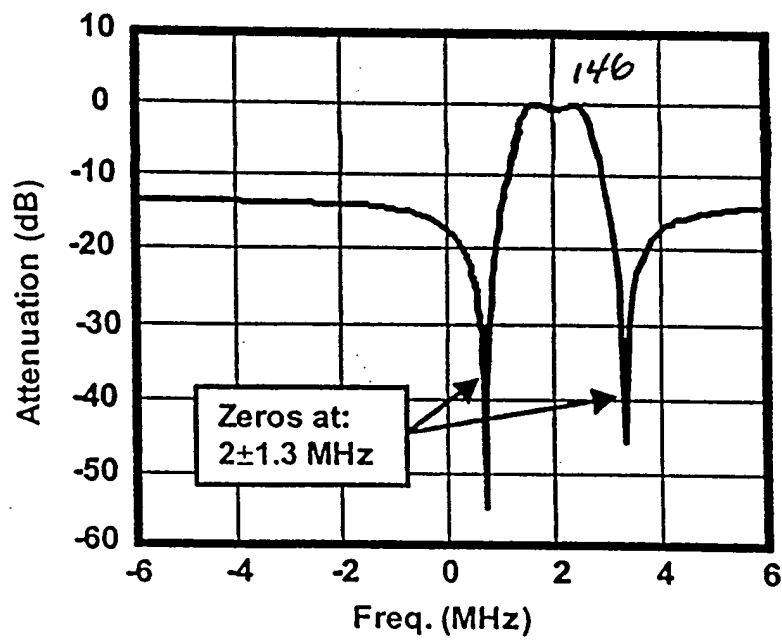


FIG. 11

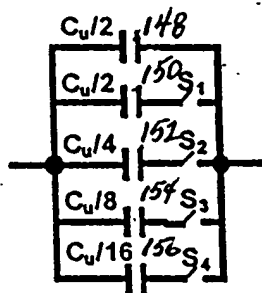


FIG. 12(a)

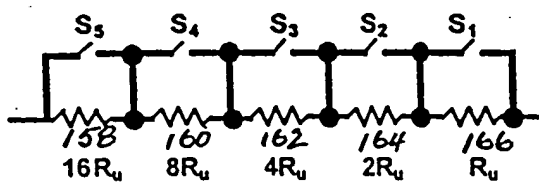


FIG. 12(b)

**THE UNIVERSITY OF CHICAGO**

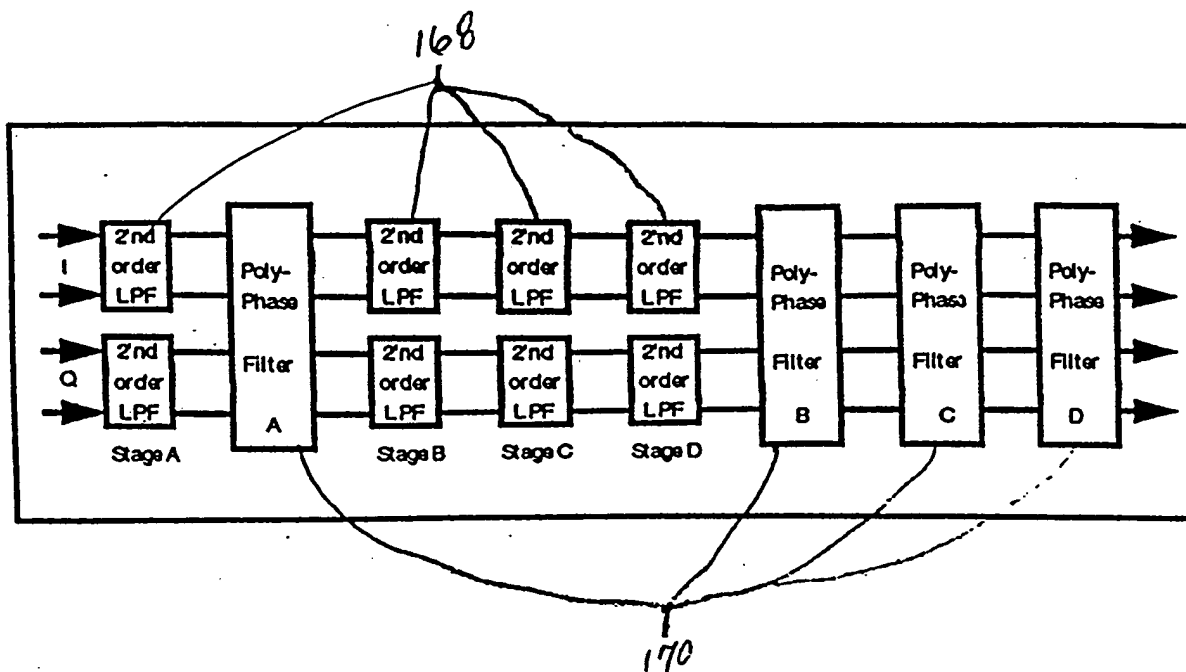


FIG. 13

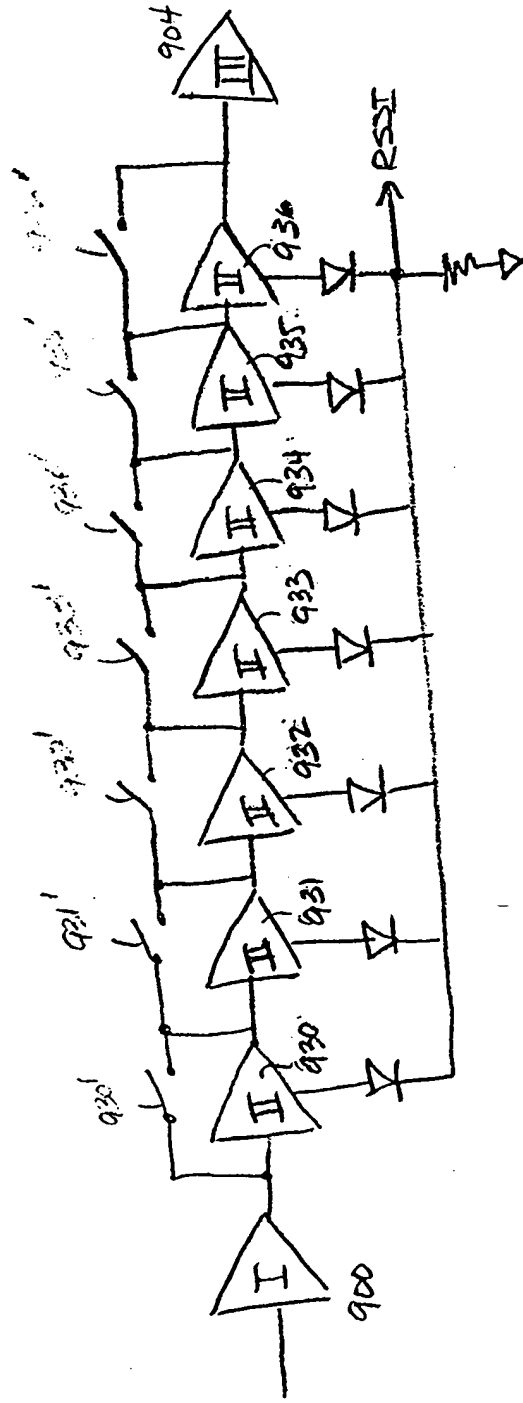


FIG. 14

FIG. 15

1.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 2.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 3.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 4.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 5.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 6.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 7.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 8.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 9.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$   
 10.  $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$

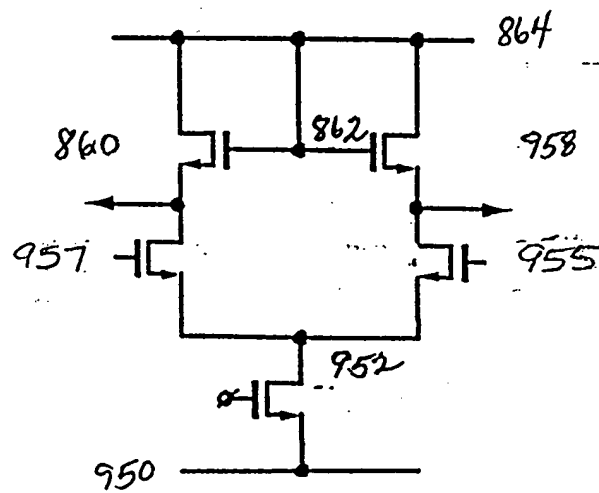


FIG. 16(a)



FIG. 16(b)

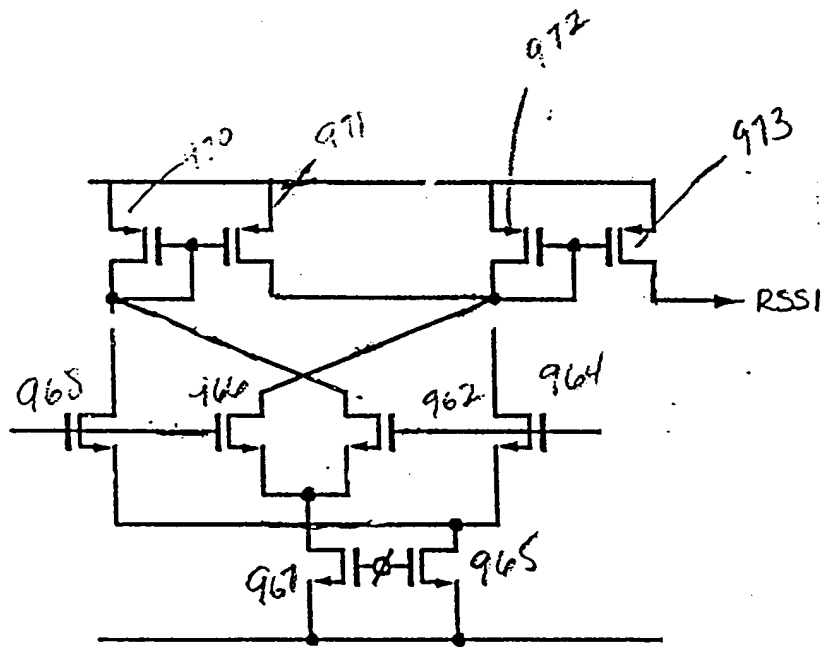


FIG. 17(a)

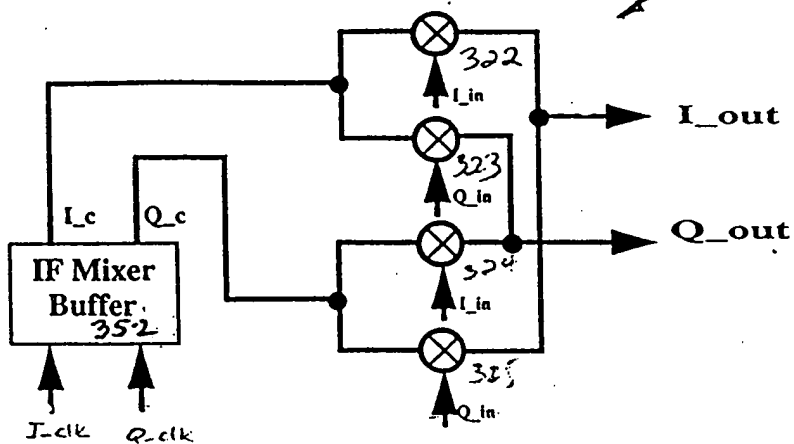


FIG. 17(b)

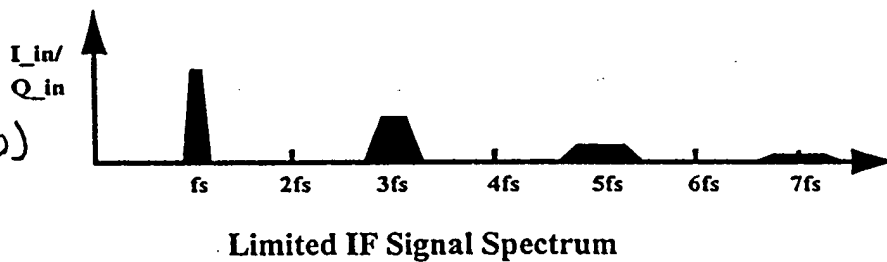


FIG. 17(c)

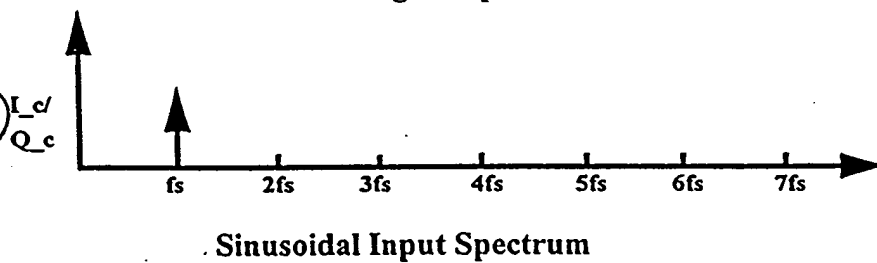
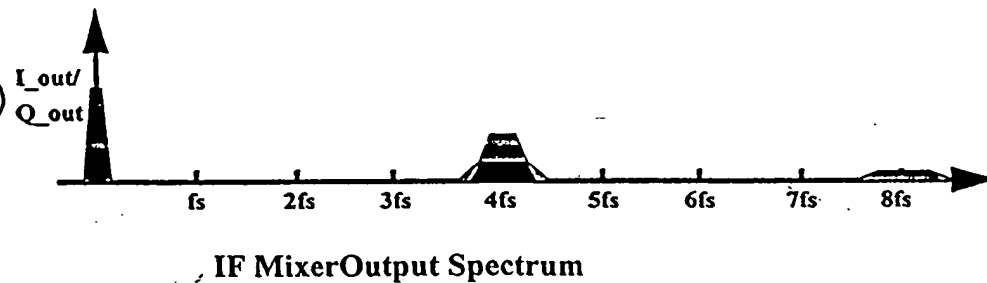


FIG. 17(d)



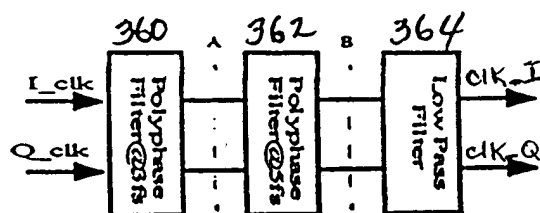
[illegible]

FIG. 19(a)

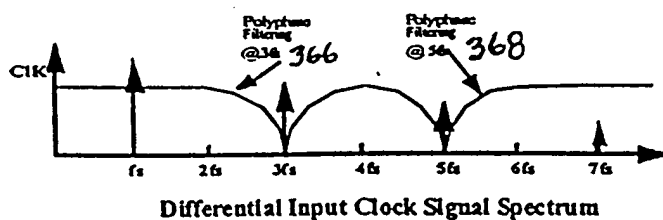


FIG. 19(b)

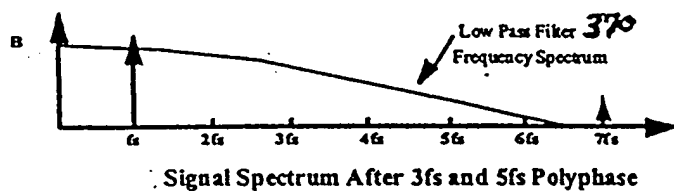
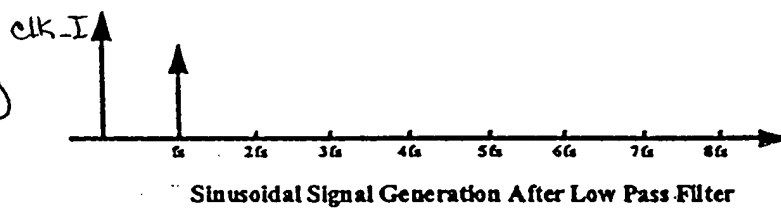


FIG. 19(c)



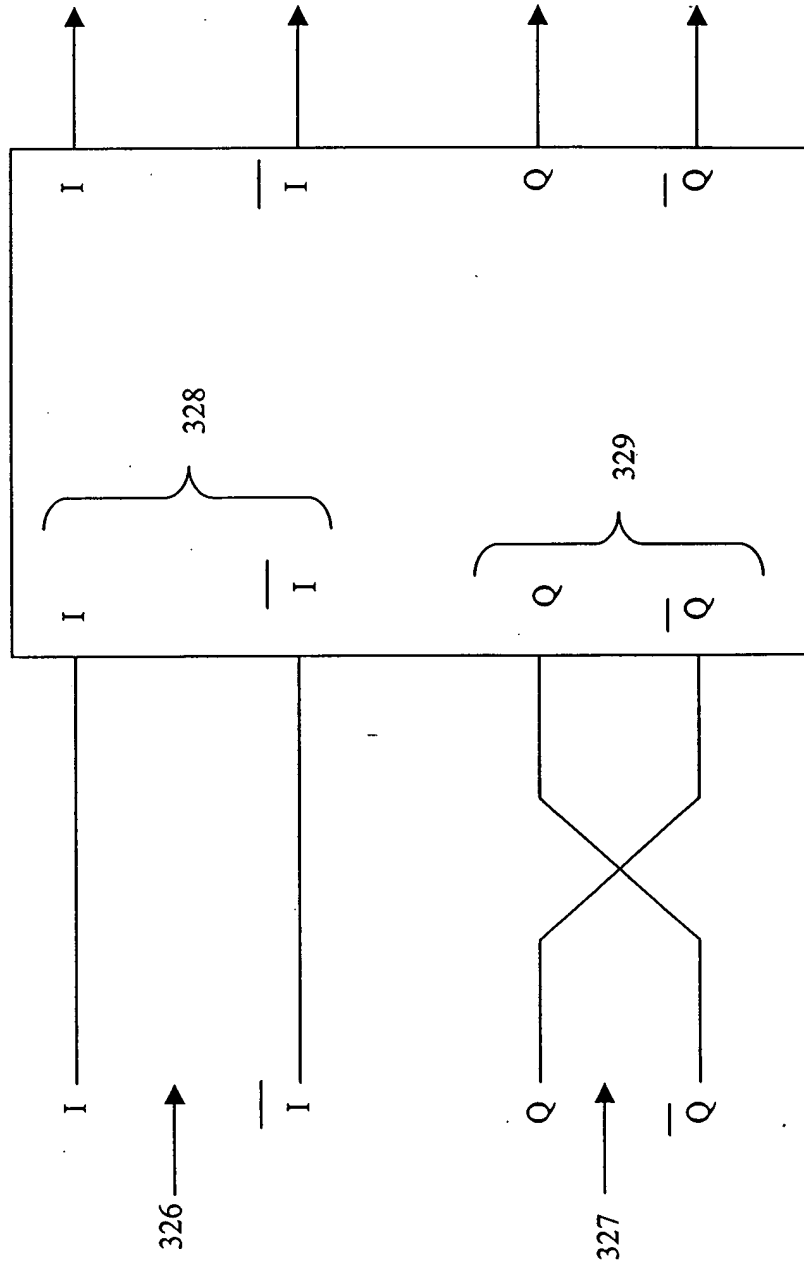


FIG. 19d

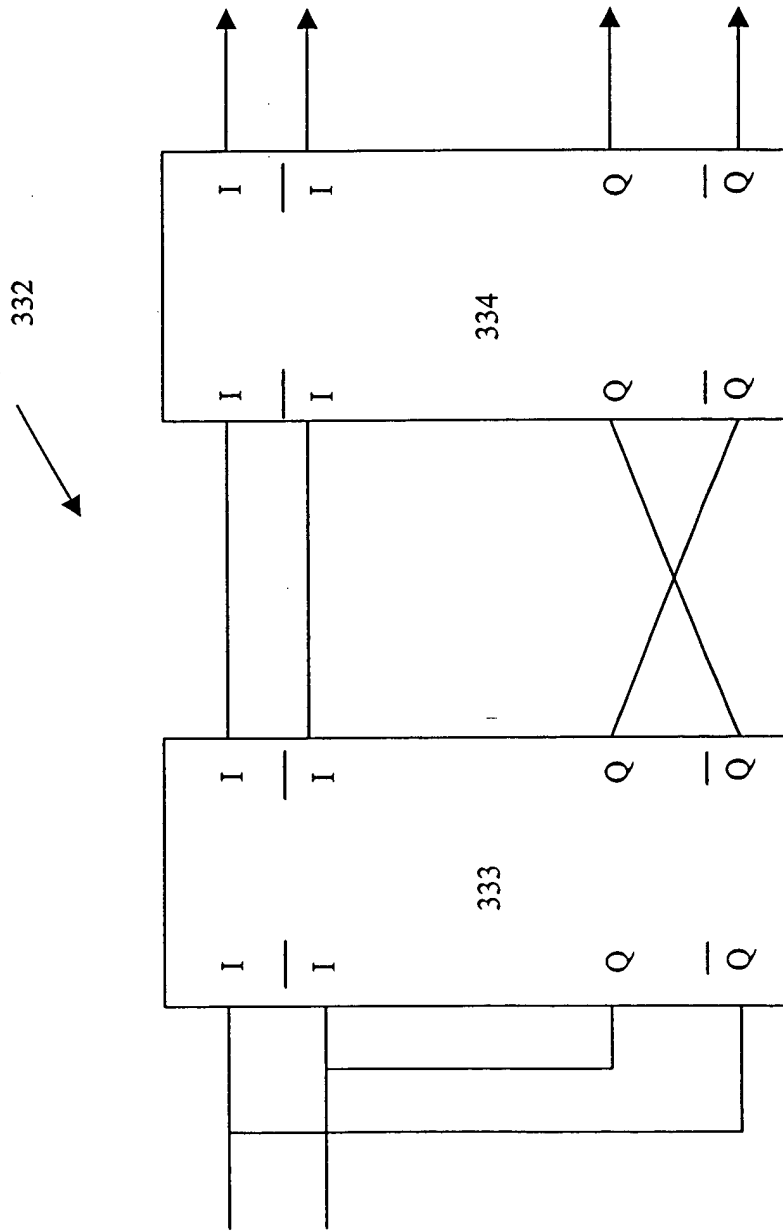


FIG. 19e

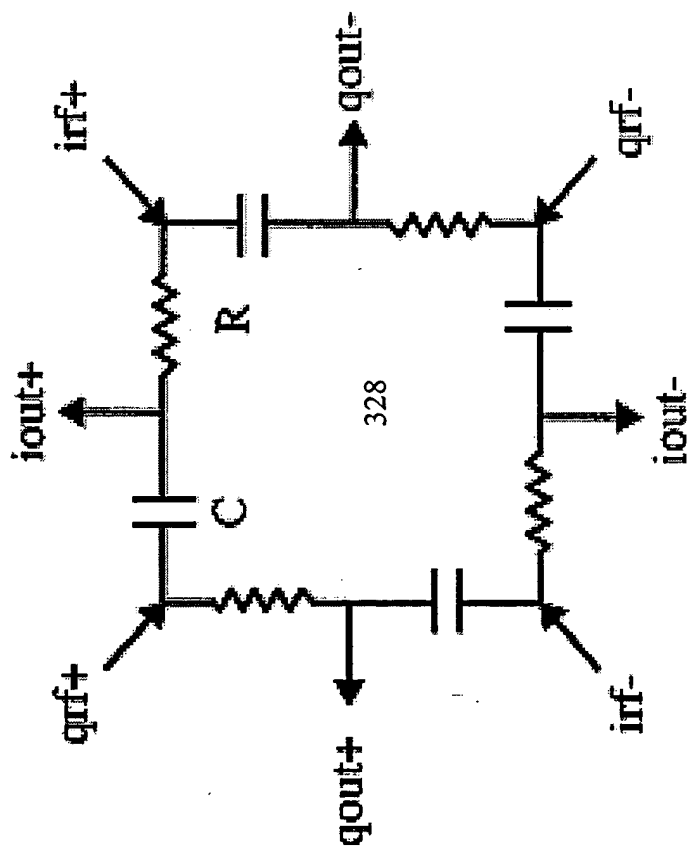
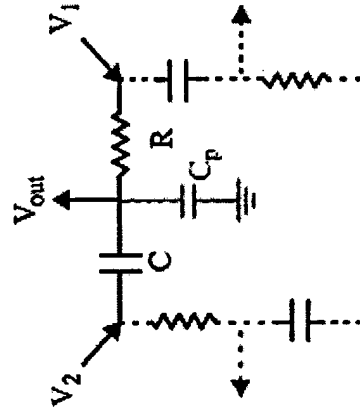


FIG. 19f



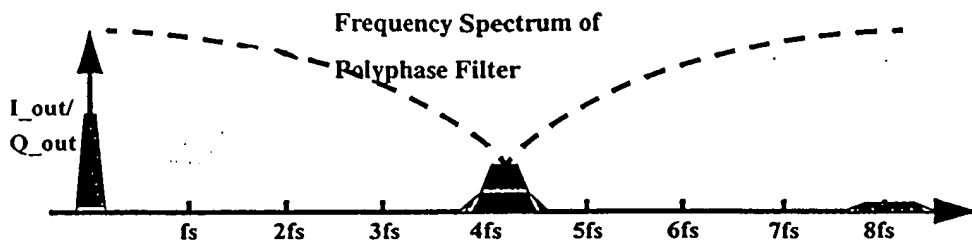
$$\omega_p = \frac{1}{R(C_p + C)}$$

$$\omega_o = \frac{1}{RC}$$

$$V_{out} = \frac{V_1}{R(C_p + C)s + 1} + \frac{V_2 RCs}{R(C_p + C)s + 1}$$

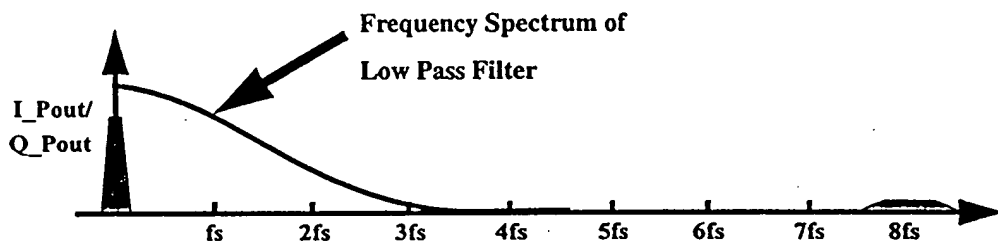


FIG. 19g



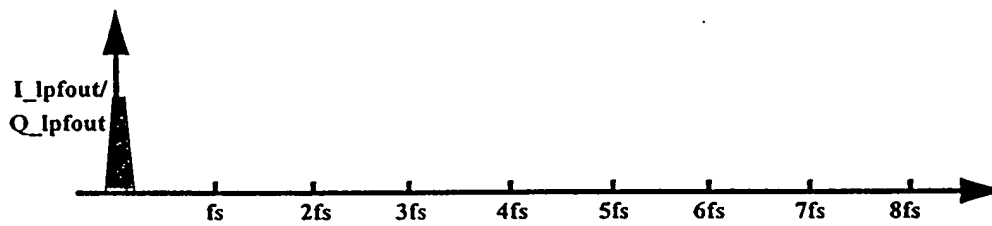
Signal Spectrum at Polyphase Input

FIG. 20(a)



Signal Spectrum at Polyphase Output

FIG. 20(b)



Signal Spectrum at Low Pass Filter Output

FIG. 20(c)



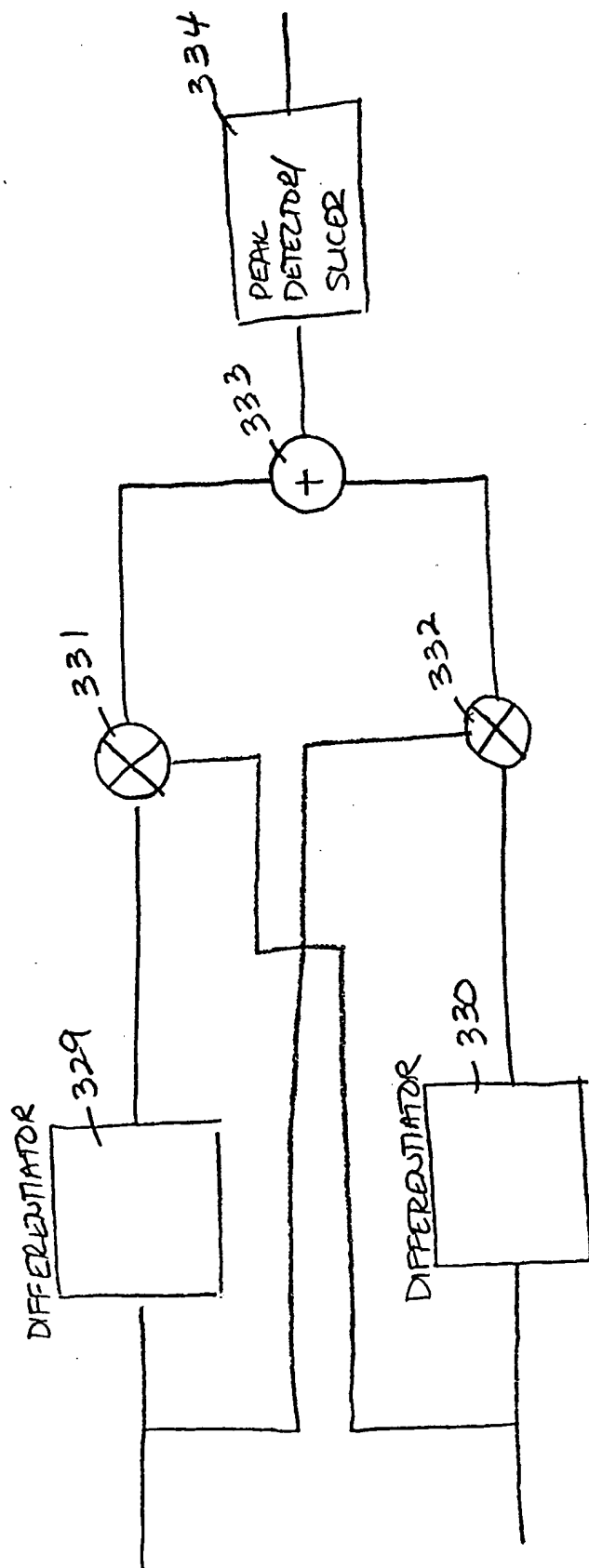


FIG. 21

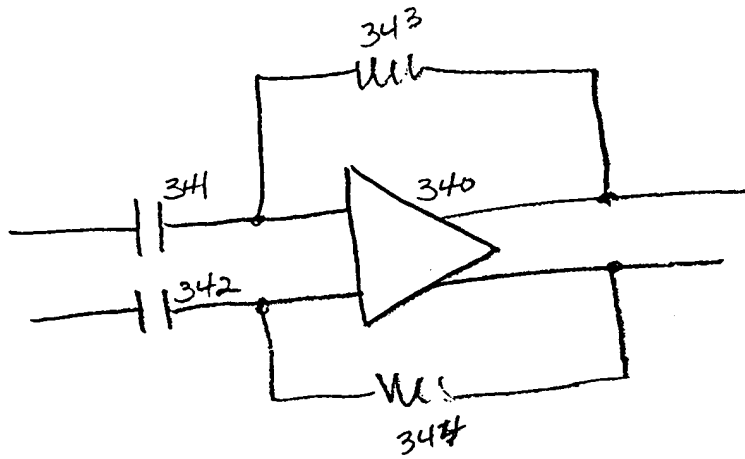


FIGURE 22

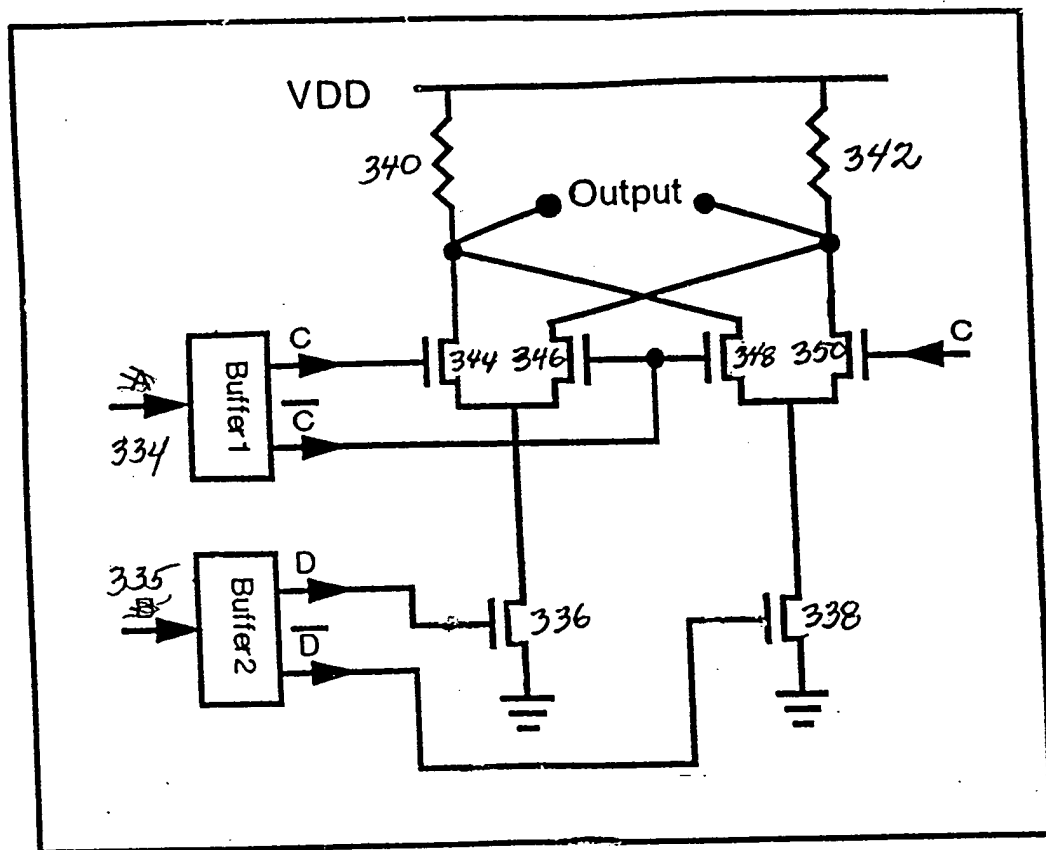
[illegible]

FIG. 23

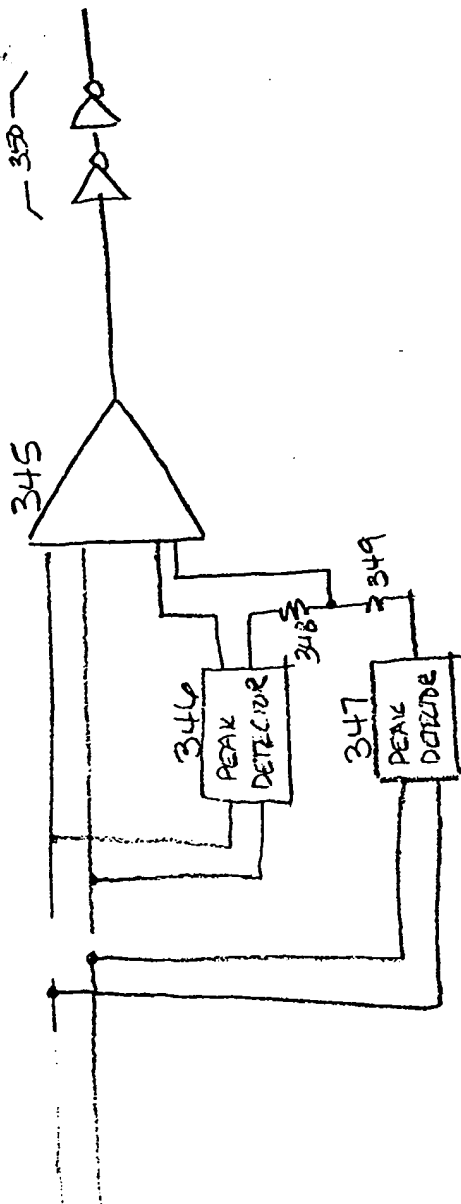


FIGURE 24

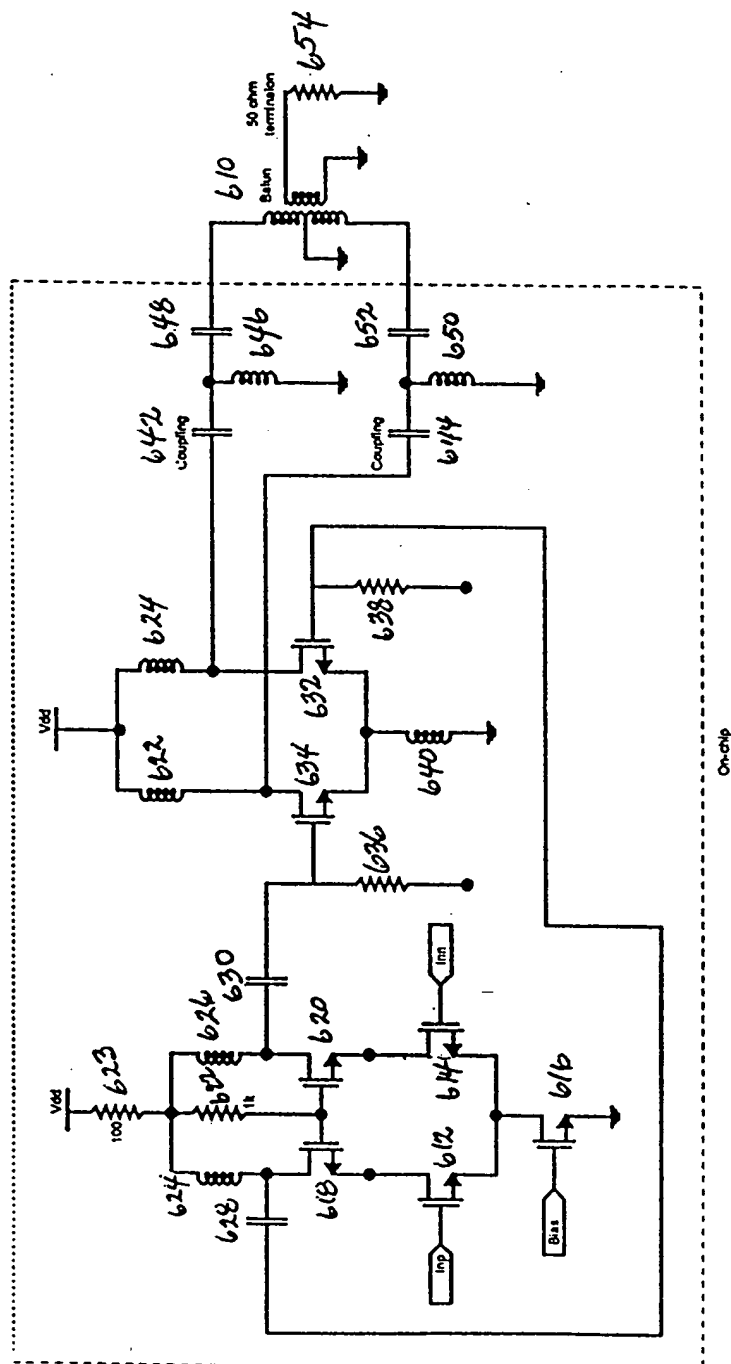


FIG. 25

Q. Now, you said that you were not sure if the person was a woman or a man, is that correct?

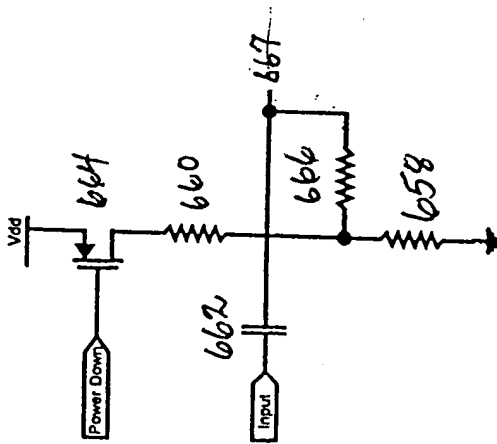


FIG. 26(b)

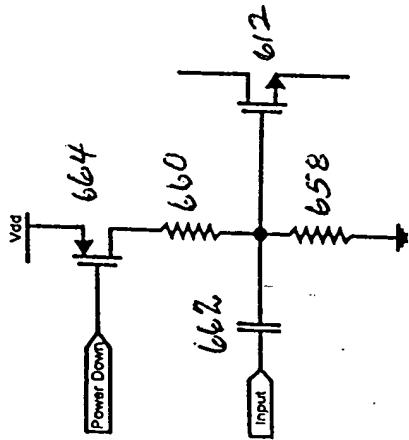


FIG. 26(a)

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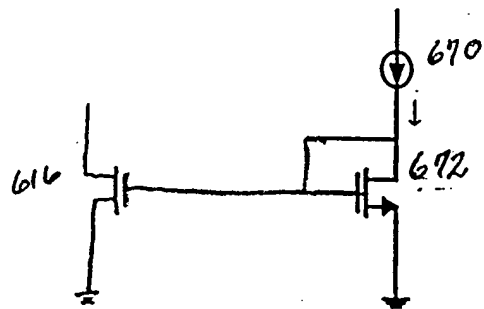


FIG. 27

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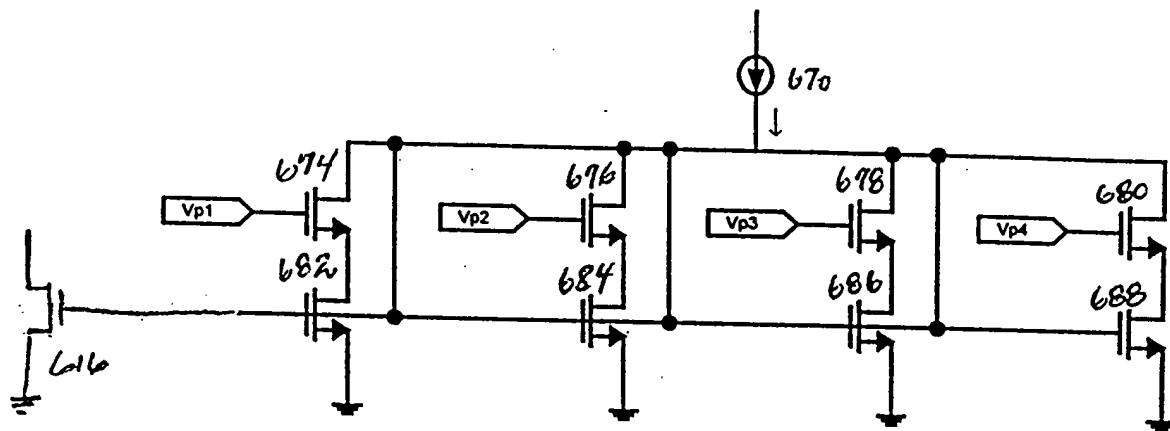


FIG. 28



002001 0406560

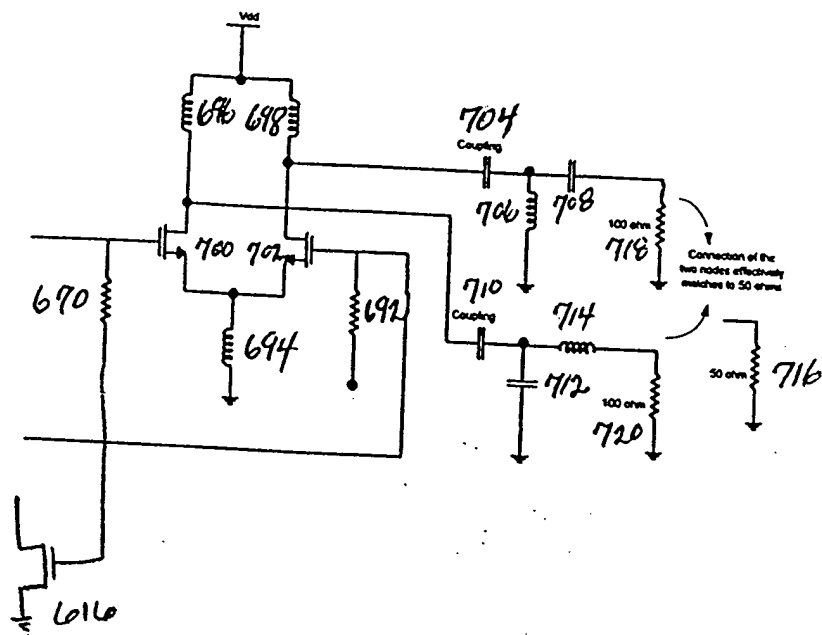


FIG. 29

1. *Pharmaceuticals*  
 2. *Medical Devices*  
 3. *Biotechnology*  
 4. *Healthcare Services*  
 5. *Medical Research*  
 6. *Health Insurance*  
 7. *Medical Education*  
 8. *Healthcare Policy*  
 9. *Medical Ethics*  
 10. *Healthcare Economics*  
 11. *Medical Law*  
 12. *Healthcare Quality*  
 13. *Medical Innovation*  
 14. *Healthcare Access*  
 15. *Medical Regulation*  
 16. *Healthcare Reform*  
 17. *Medical Practice*  
 18. *Healthcare Management*  
 19. *Medical Research Funding*  
 20. *Healthcare Policy Analysis*  
 21. *Medical Ethics Case Studies*  
 22. *Healthcare Economics Research*  
 23. *Medical Law Cases*  
 24. *Healthcare Quality Improvement*  
 25. *Medical Innovation Strategies*  
 26. *Healthcare Access Programs*  
 27. *Medical Regulation Frameworks*  
 28. *Healthcare Reform Initiatives*  
 29. *Medical Practice Guidelines*  
 30. *Healthcare Management Systems*  
 31. *Medical Research Funding Sources*  
 32. *Healthcare Policy Implementation*  
 33. *Medical Ethics Education*  
 34. *Healthcare Economics Models*  
 35. *Medical Law Legislation*  
 36. *Healthcare Quality Standards*  
 37. *Medical Innovation Partnerships*  
 38. *Healthcare Access Barriers*  
 39. *Medical Regulation Enforcement*  
 40. *Healthcare Reform Challenges*  
 41. *Medical Practice Trends*  
 42. *Healthcare Management Best Practices*  
 43. *Medical Research Funding Allocation*  
 44. *Healthcare Policy Impact Assessment*  
 45. *Medical Ethics Decision Making*  
 46. *Healthcare Economics Data Analysis*  
 47. *Medical Law Litigation*  
 48. *Healthcare Quality Measurement*  
 49. *Medical Innovation Disruption*  
 50. *Healthcare Access Expansion*  
 51. *Medical Regulation Modernization*  
 52. *Healthcare Reform Evaluation*  
 53. *Medical Practice Innovation*  
 54. *Healthcare Management Optimization*  
 55. *Medical Research Funding Transparency*  
 56. *Healthcare Policy Communication*  
 57. *Medical Ethics Training*  
 58. *Healthcare Economics Forecasting*  
 59. *Medical Law Advocacy*  
 60. *Healthcare Quality Benchmarking*  
 61. *Medical Innovation Incubation*  
 62. *Healthcare Access Promotion*  
 63. *Medical Regulation Harmonization*  
 64. *Healthcare Reform Implementation*  
 65. *Medical Practice Collaboration*  
 66. *Healthcare Management Integration*  
 67. *Medical Research Funding Accountability*  
 68. *Healthcare Policy Stakeholder Engagement*  
 69. *Medical Ethics Consultation*  
 70. *Healthcare Economics Policy Development*  
 71. *Medical Law Enforcement*  
 72. *Healthcare Quality Accreditation*  
 73. *Medical Innovation Ecosystem*  
 74. *Healthcare Access Equity*  
 75. *Medical Regulation Oversight*  
 76. *Healthcare Reform Sustainability*  
 77. *Medical Practice Excellence*  
 78. *Healthcare Management Innovation*  
 79. *Medical Research Funding Efficiency*  
 80. *Healthcare Policy Transparency*  
 81. *Medical Ethics Awareness*  
 82. *Healthcare Economics Research*  
 83. *Medical Law Reform*  
 84. *Healthcare Quality Improvement*  
 85. *Medical Innovation Leadership*  
 86. *Healthcare Access Expansion*  
 87. *Medical Regulation Modernization*  
 88. *Healthcare Reform Evaluation*  
 89. *Medical Practice Innovation*  
 90. *Healthcare Management Optimization*  
 91. *Medical Research Funding Transparency*  
 92. *Healthcare Policy Communication*  
 93. *Medical Ethics Training*  
 94. *Healthcare Economics Forecasting*  
 95. *Medical Law Advocacy*  
 96. *Healthcare Quality Benchmarking*  
 97. *Medical Innovation Incubation*  
 98. *Healthcare Access Promotion*  
 99. *Medical Regulation Oversight*  
 100. *Healthcare Reform Sustainability*

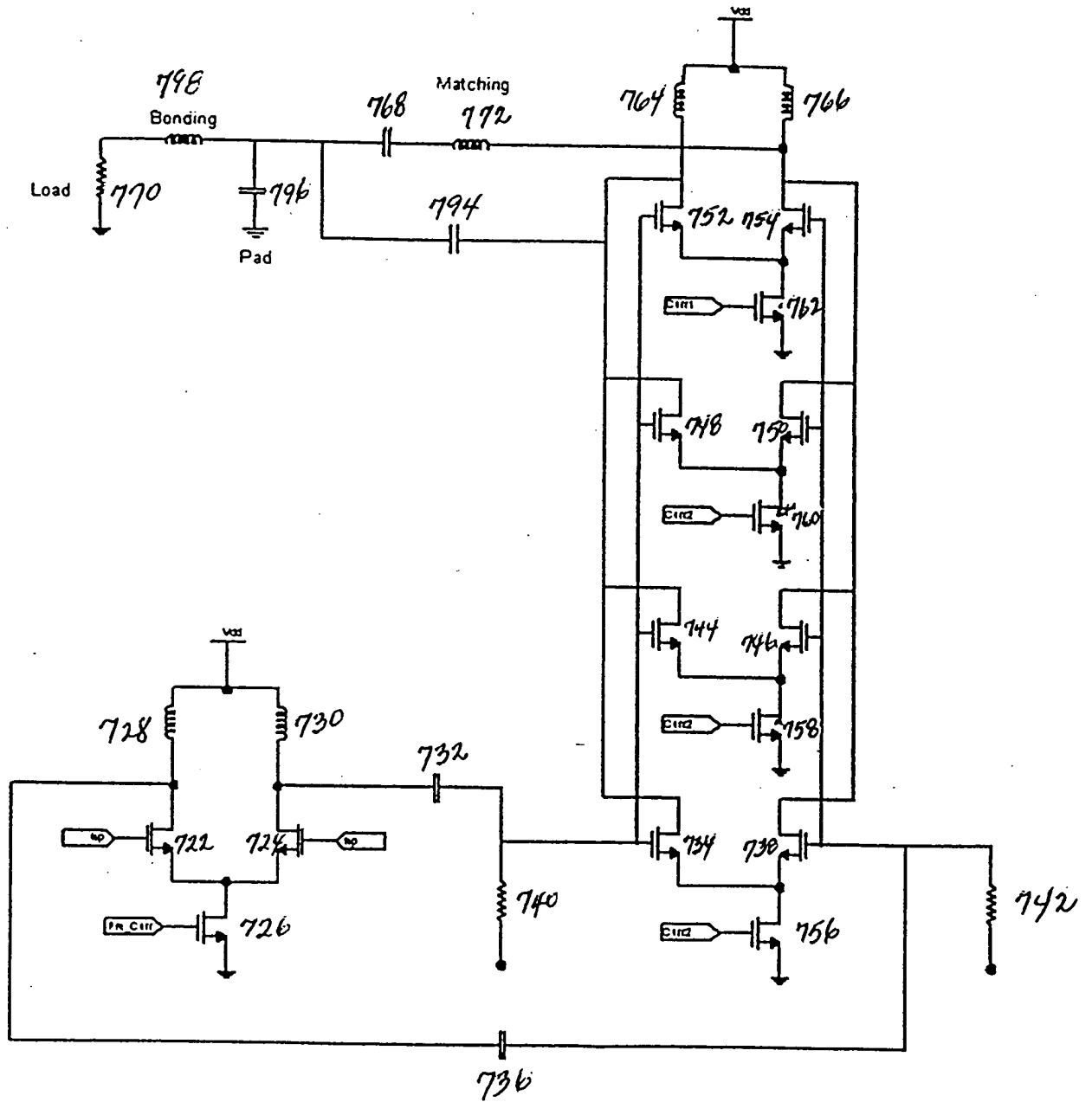


FIG. 30A

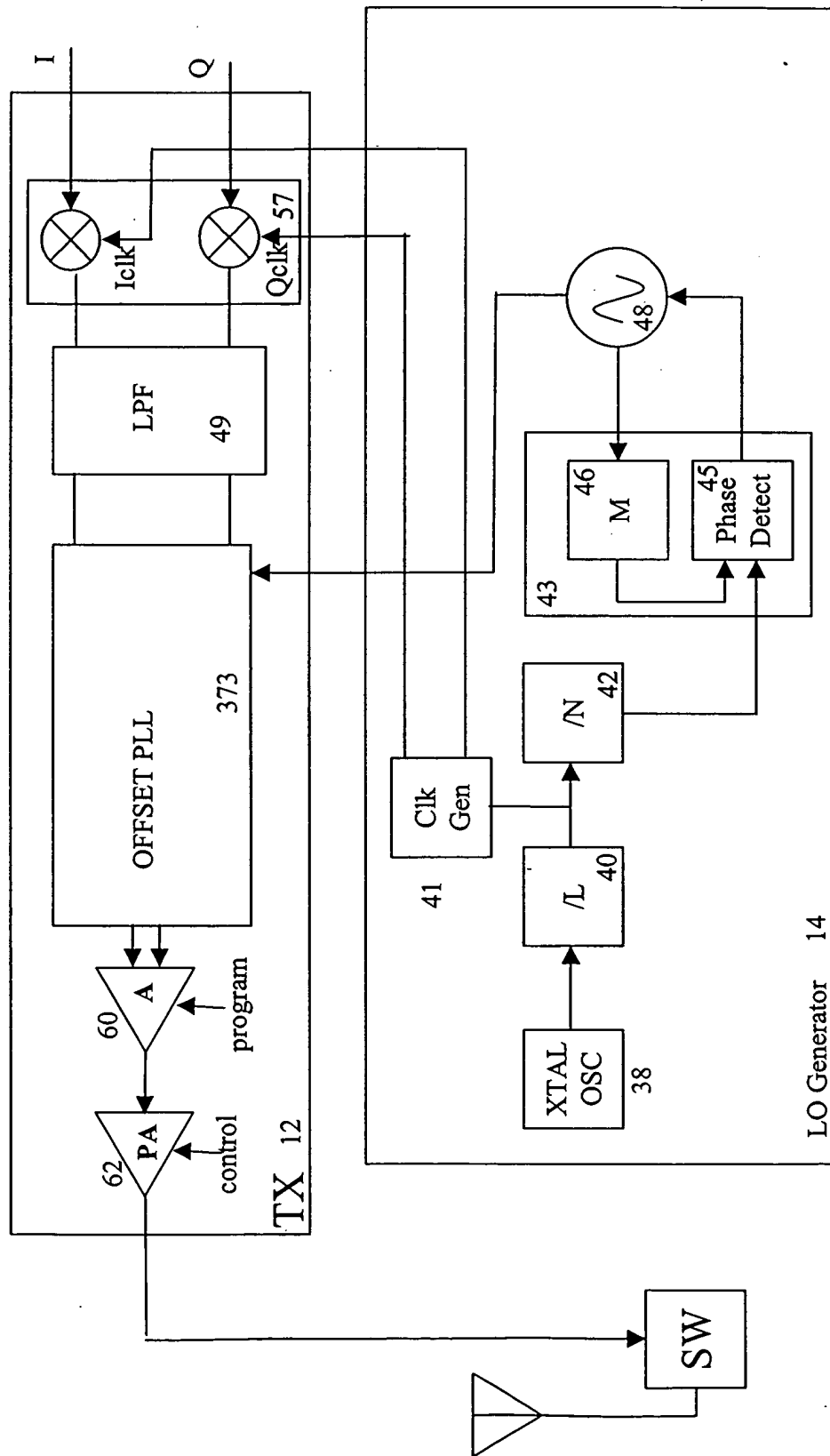


FIG. 30b

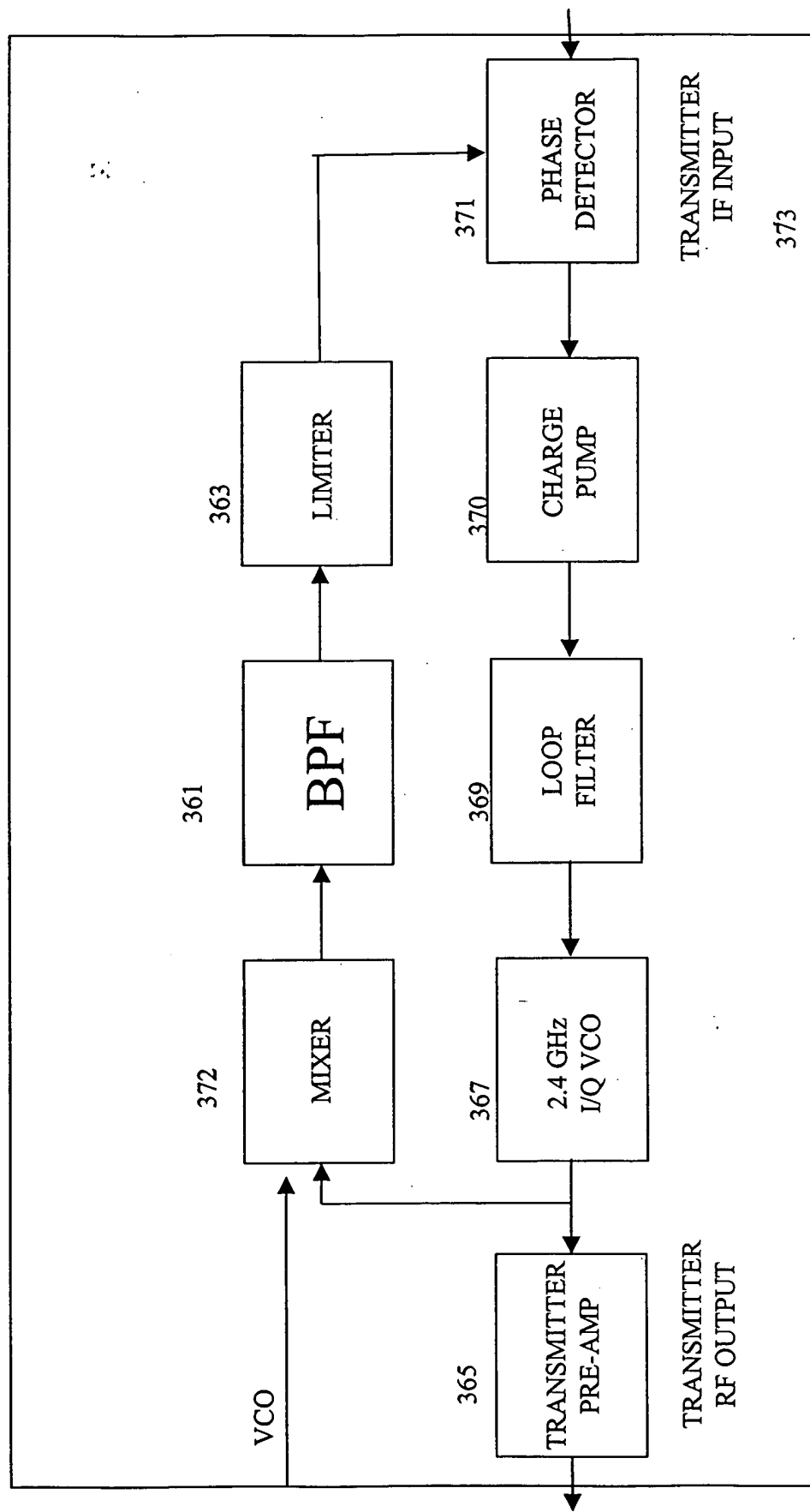
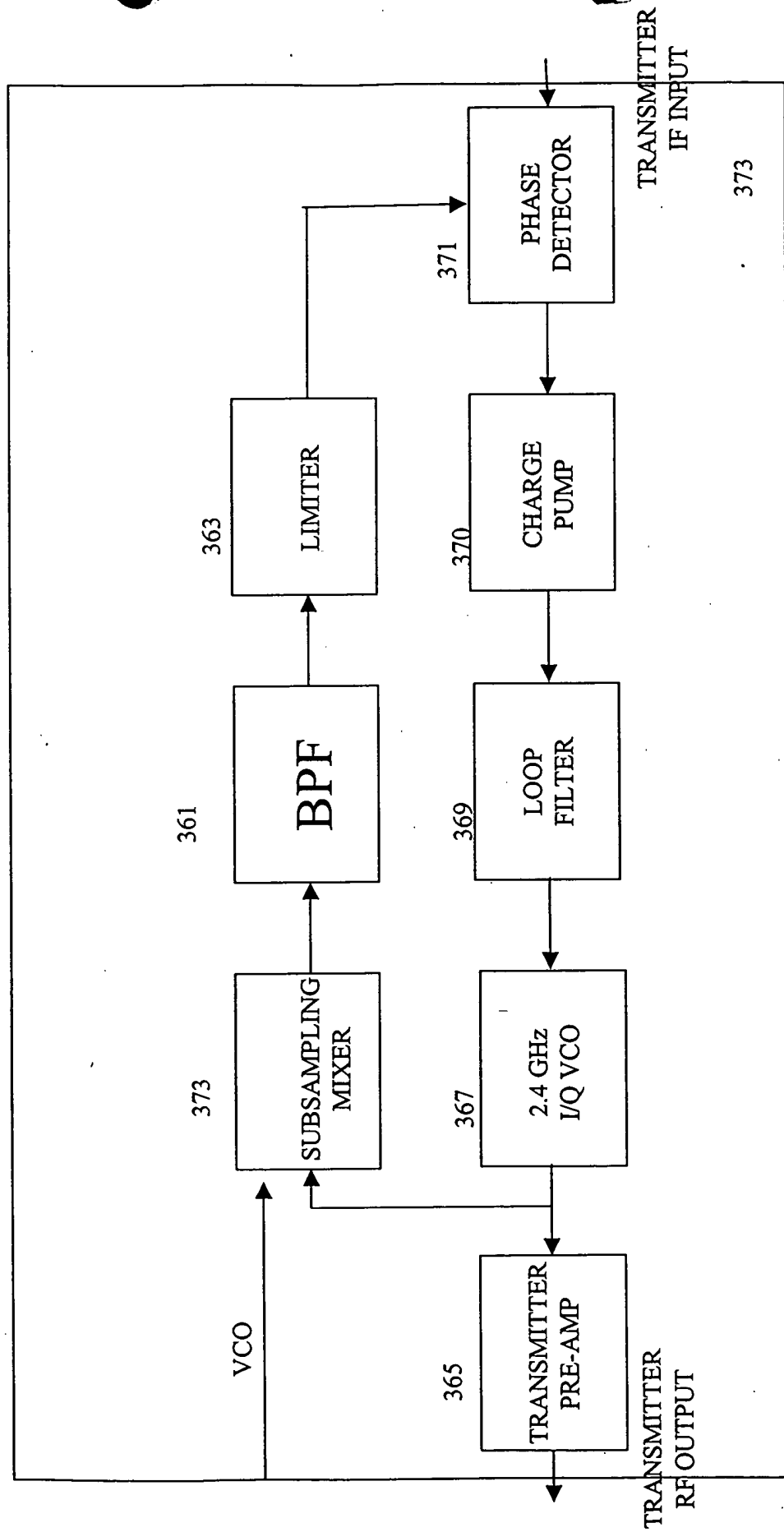


FIG. 30c



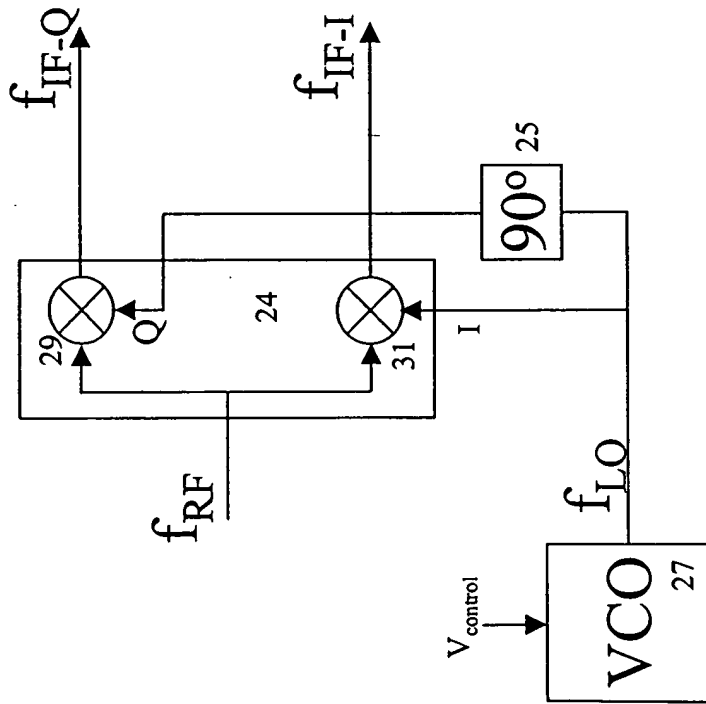


FIG. 30e

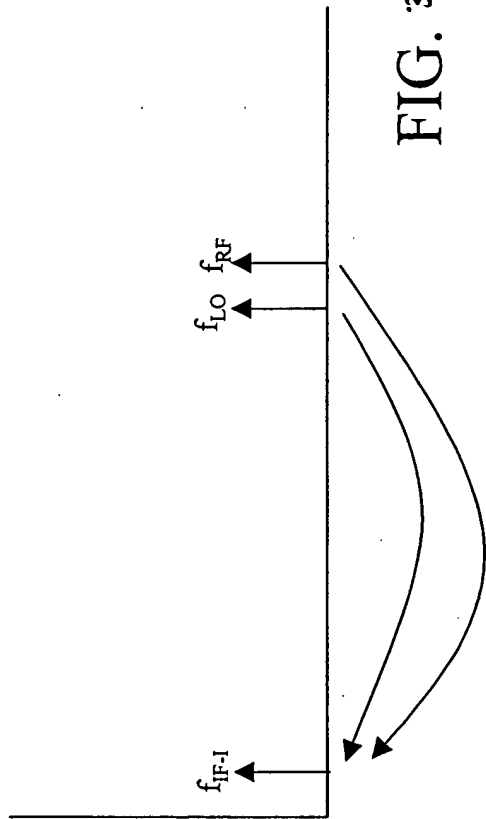


FIG. 30f

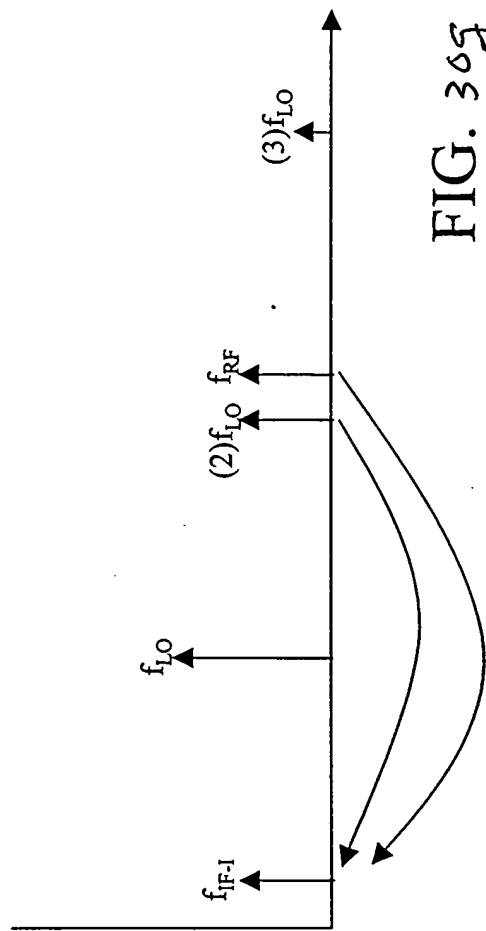


FIG. 30g

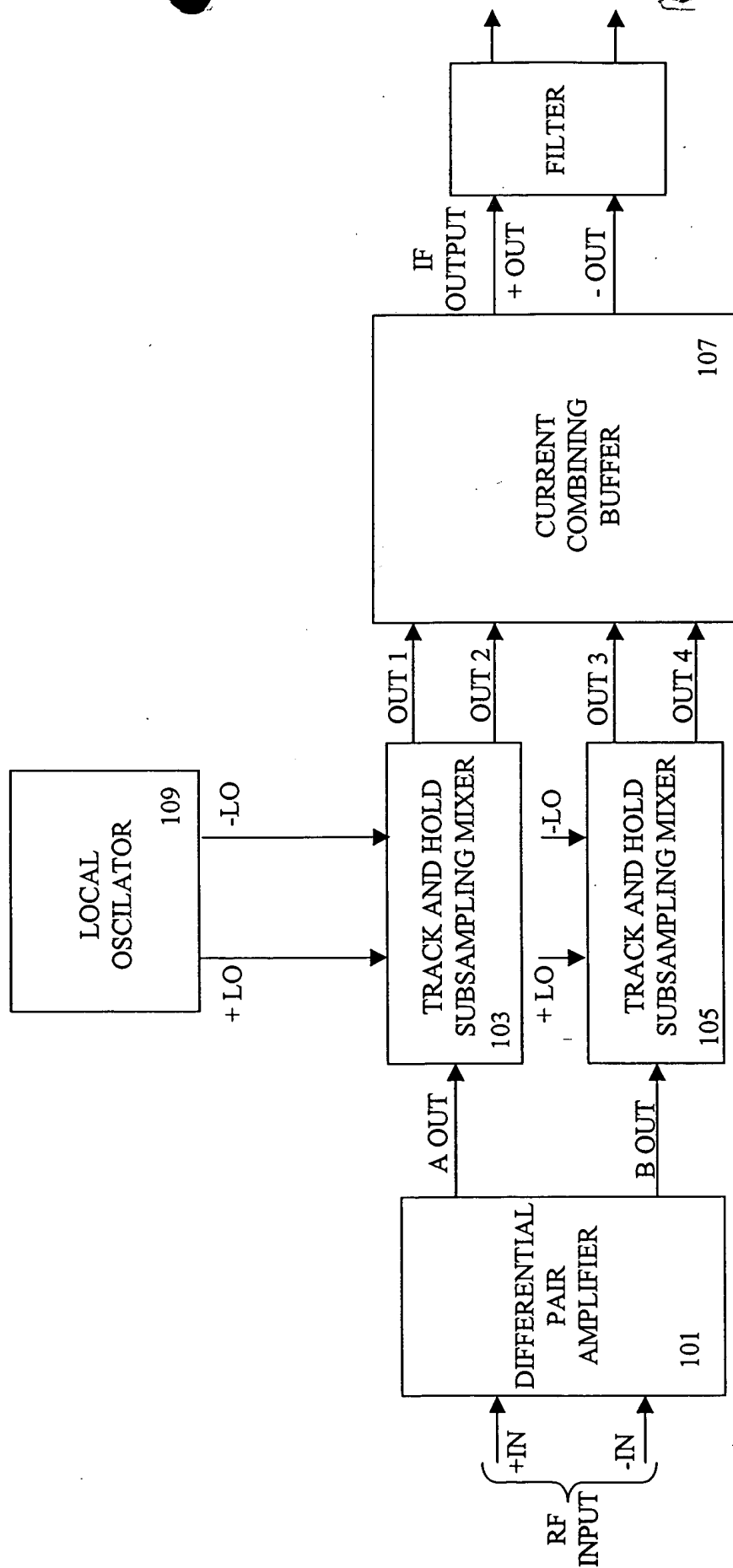


FIG. 304

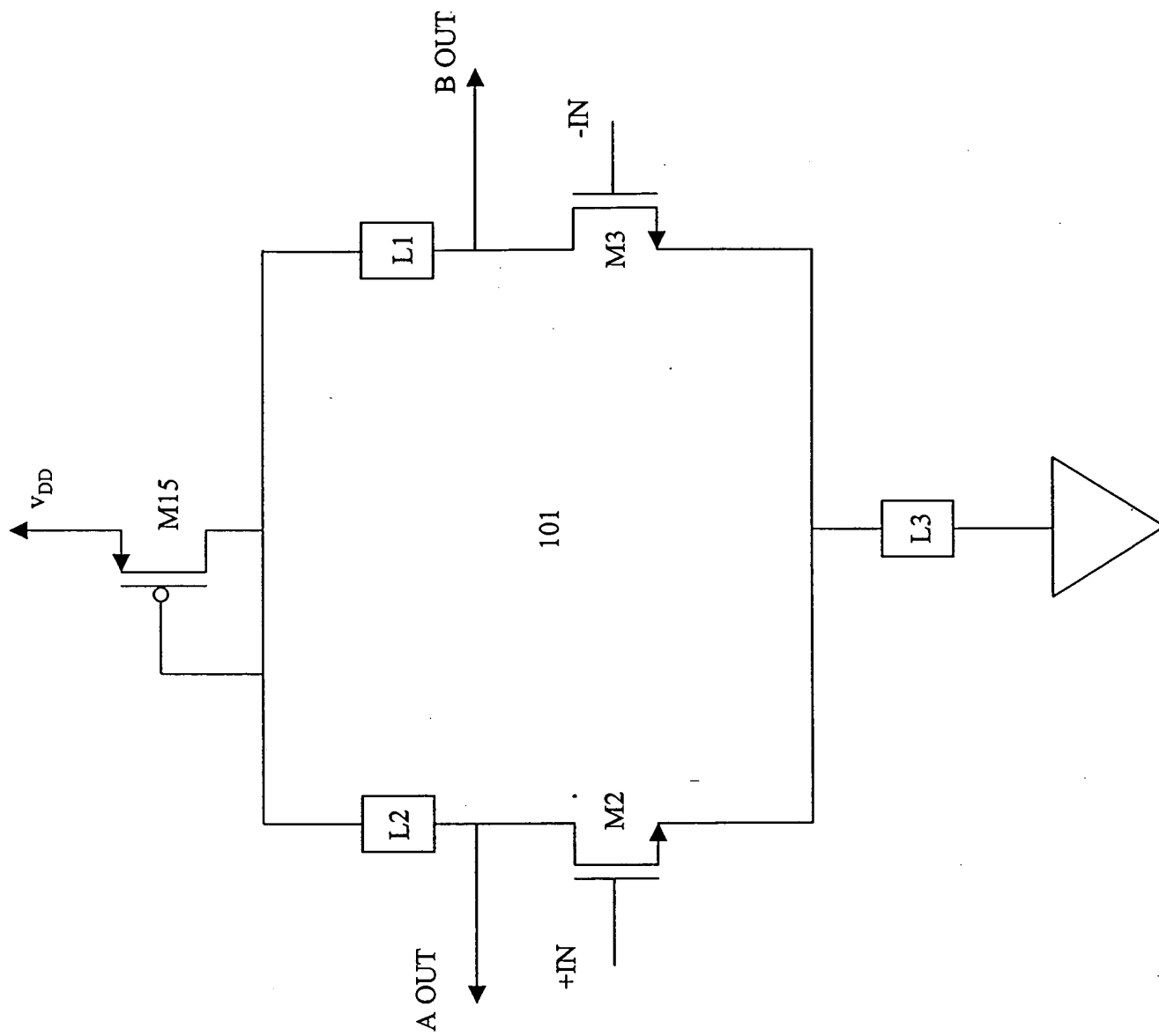
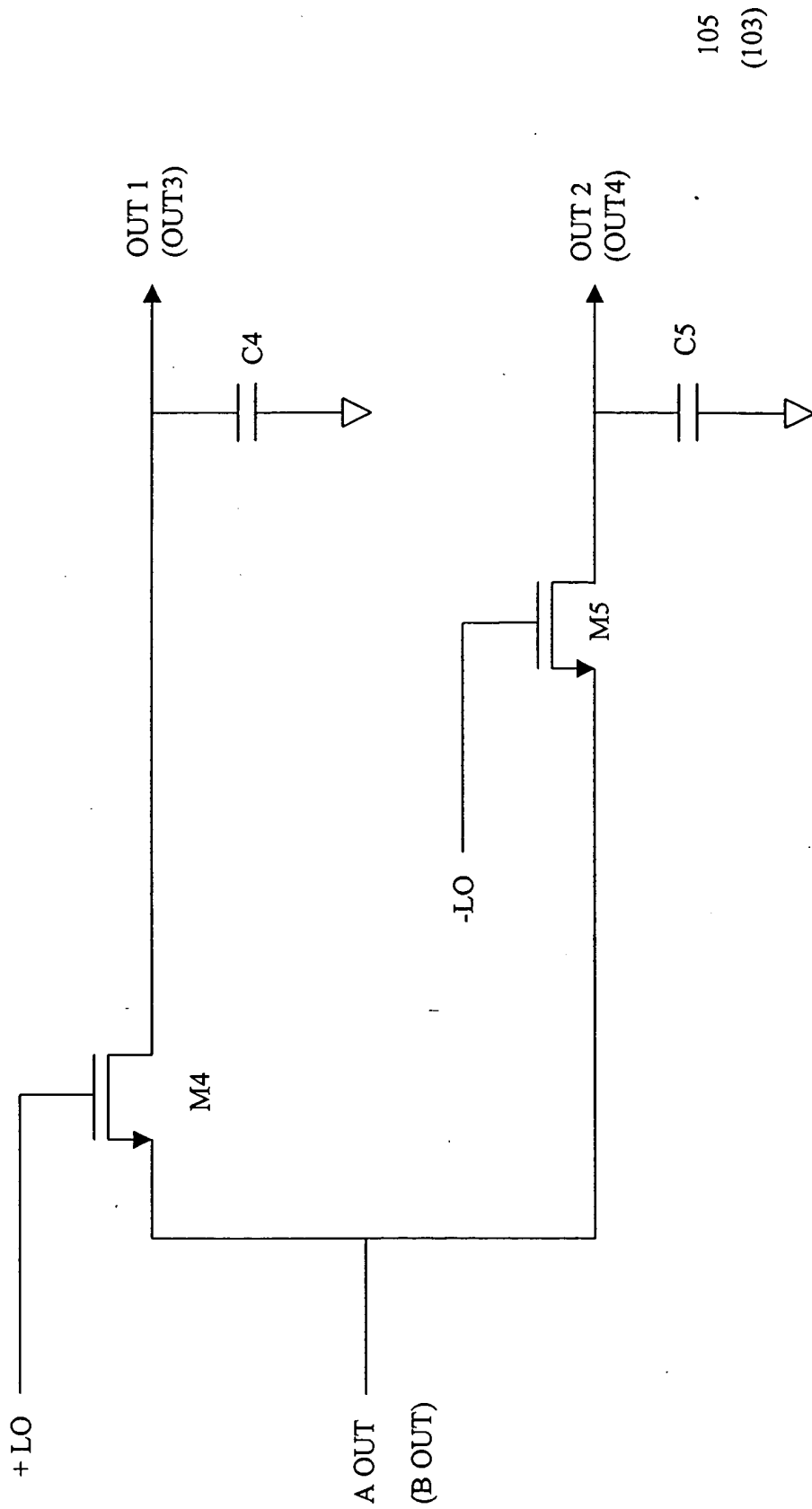


FIG. 30λ





105  
(103)

FIG. 30j

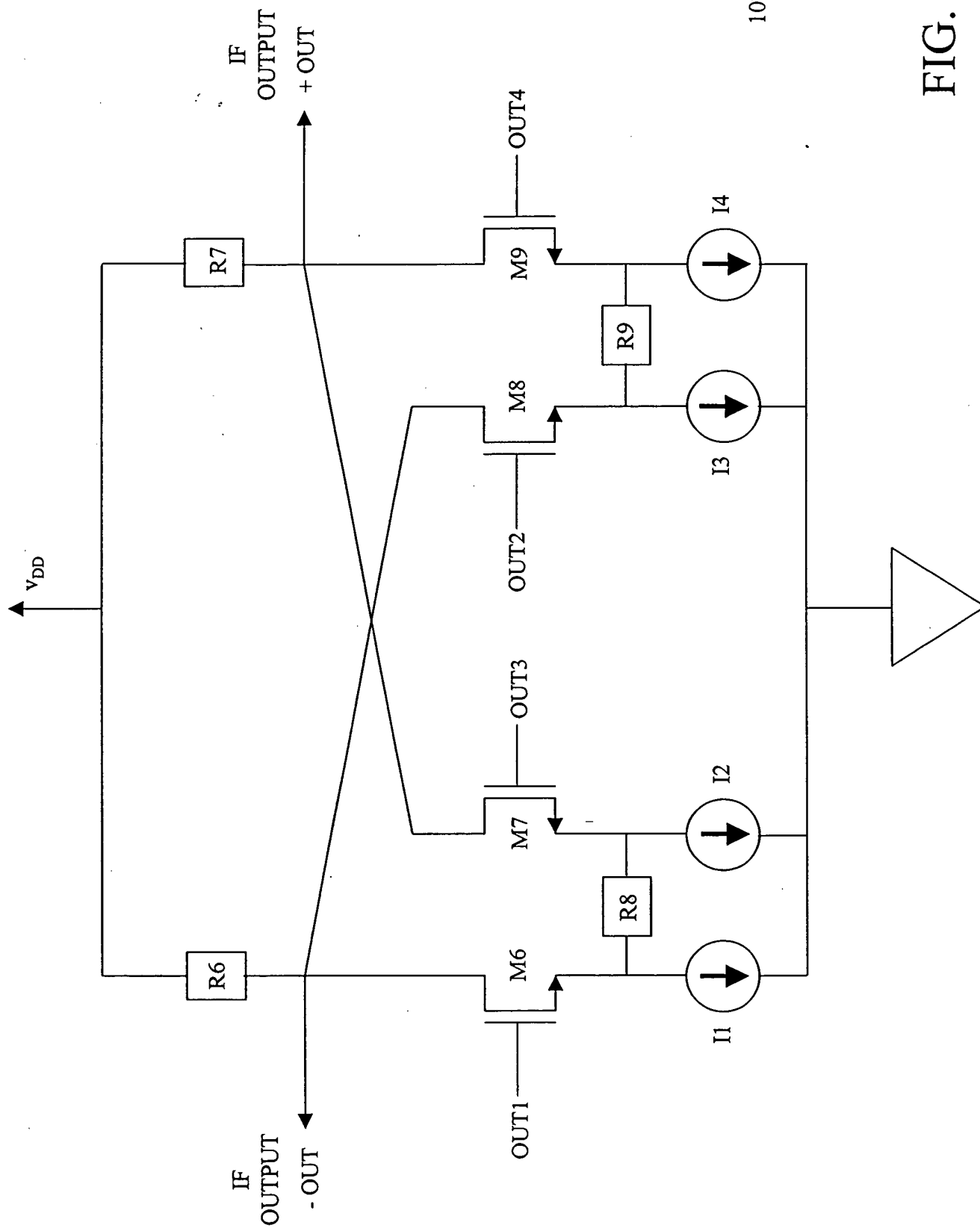


FIG. 30k



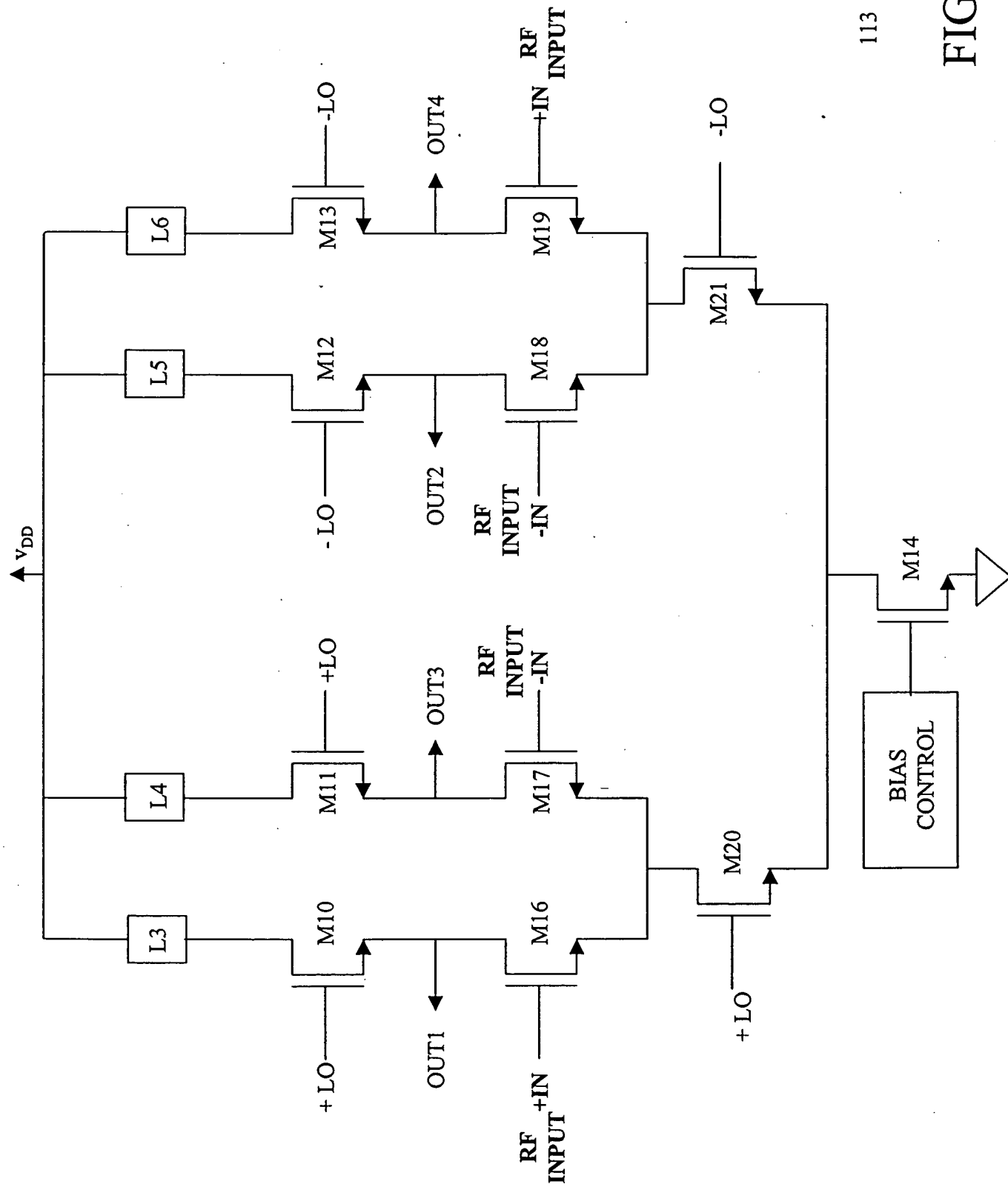


FIG. 30.m

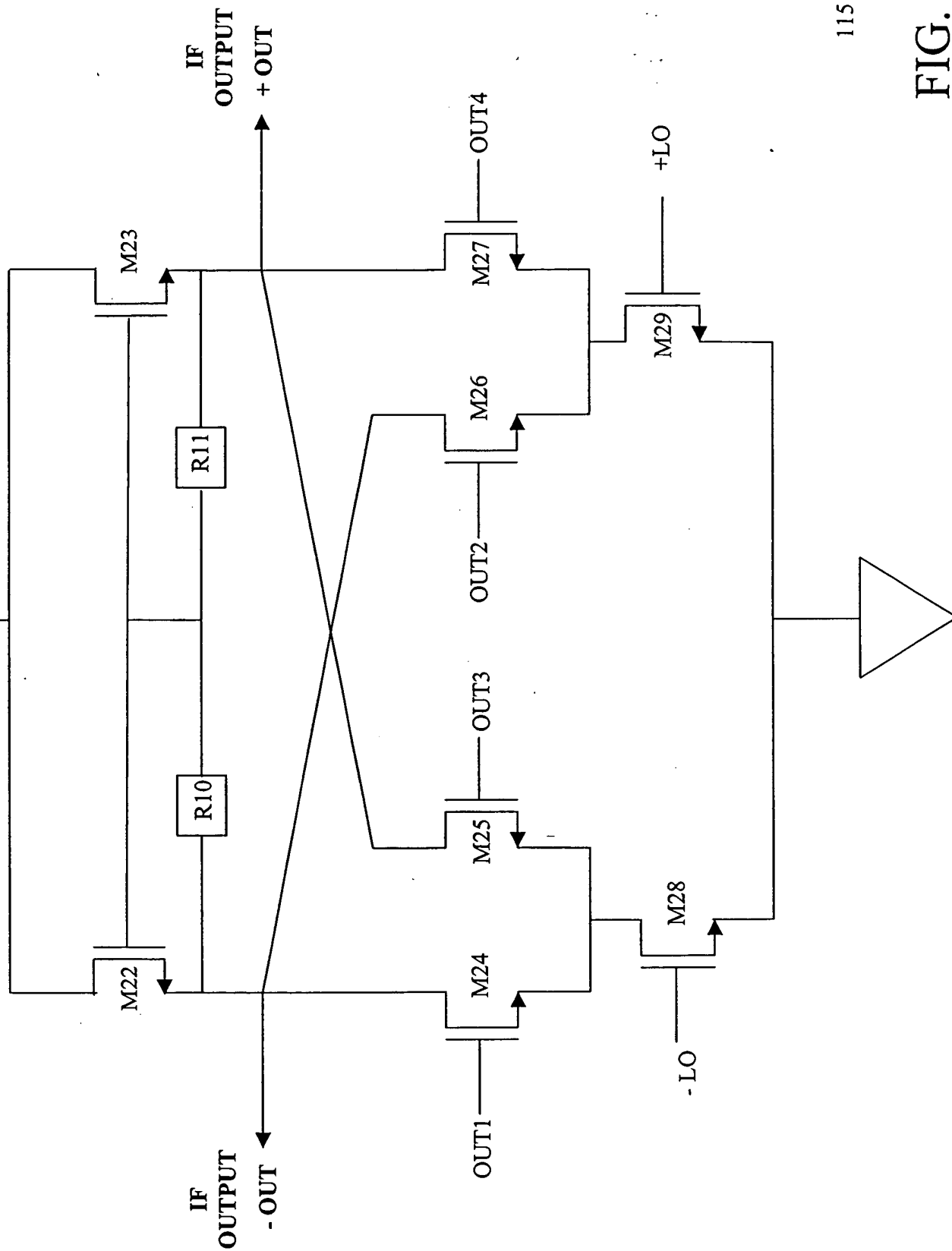


FIG. 30H

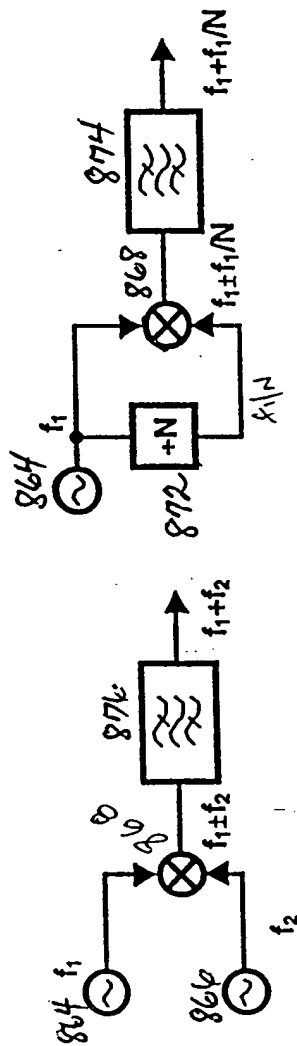


FIG. 31 (a)

FIG. 31 (b)

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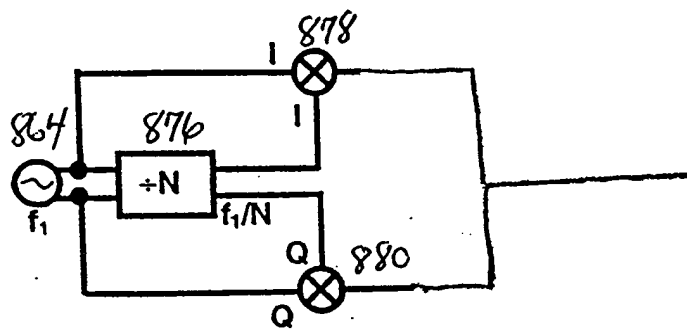


FIG. 32

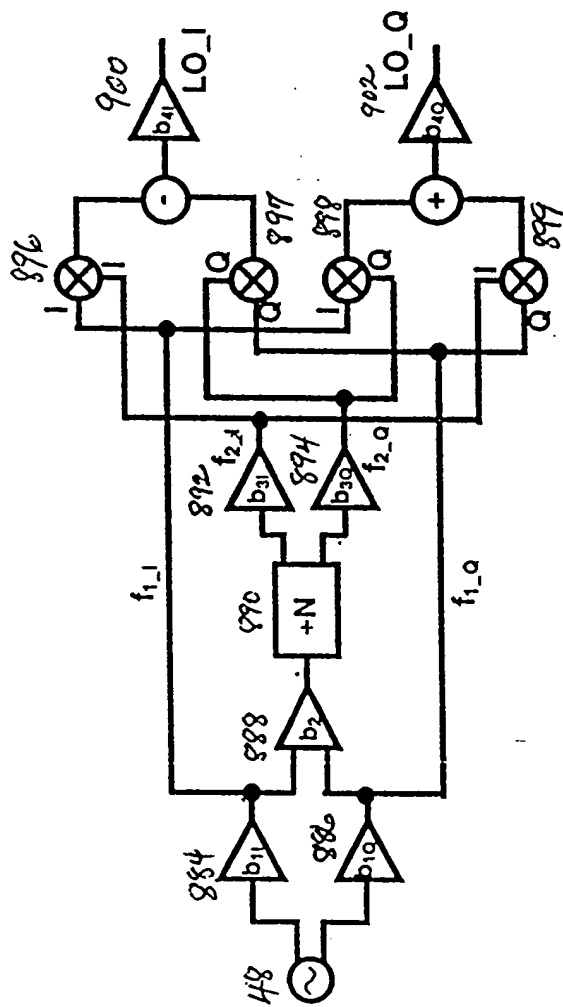


FIG. 33(a)



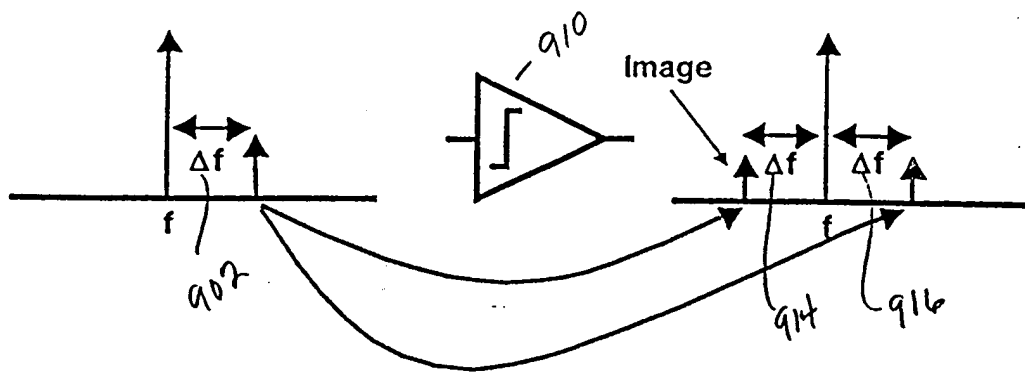


FIG. 33(b)

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

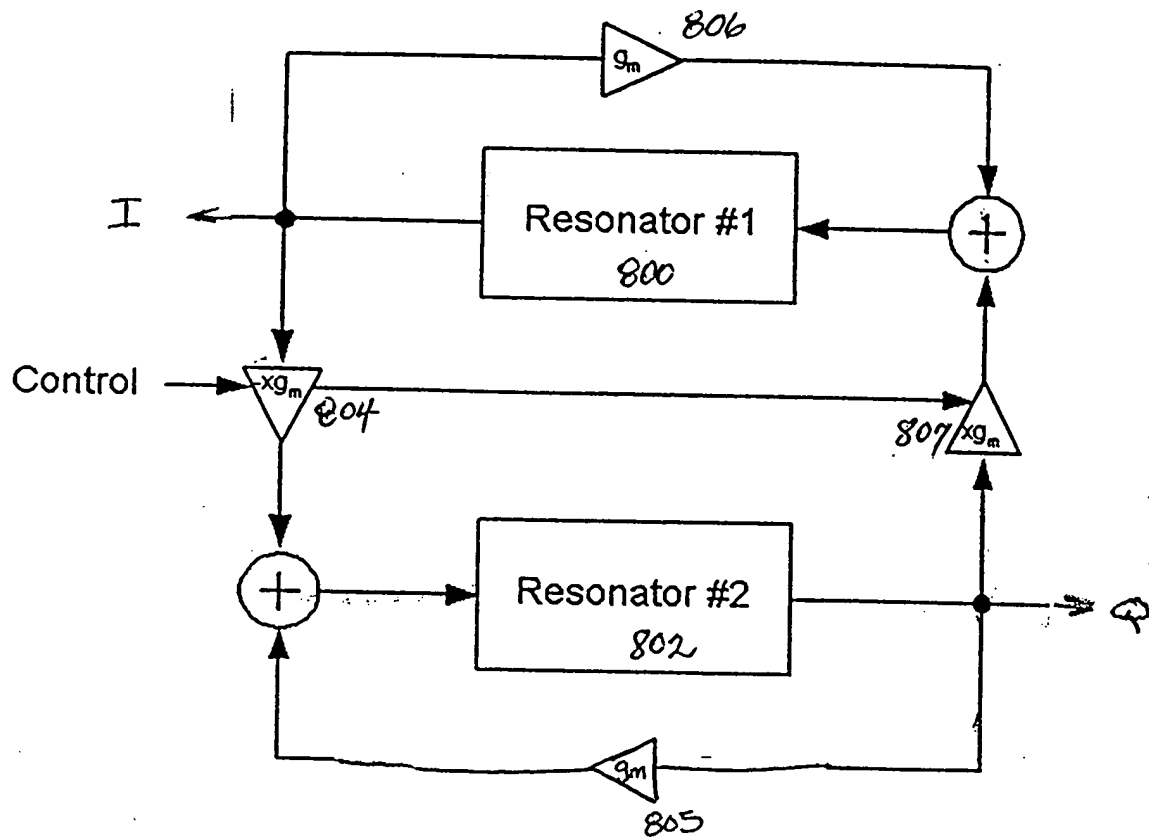


FIG. 34

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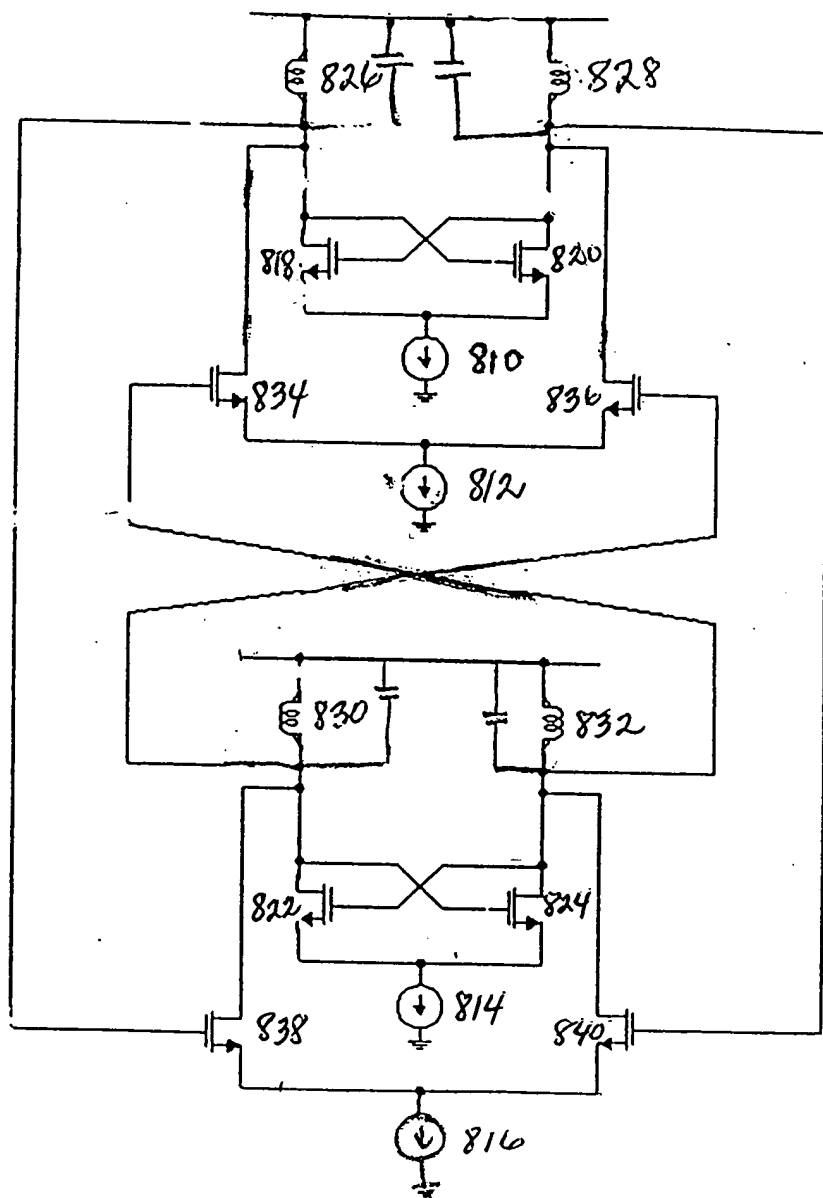


FIG. 35

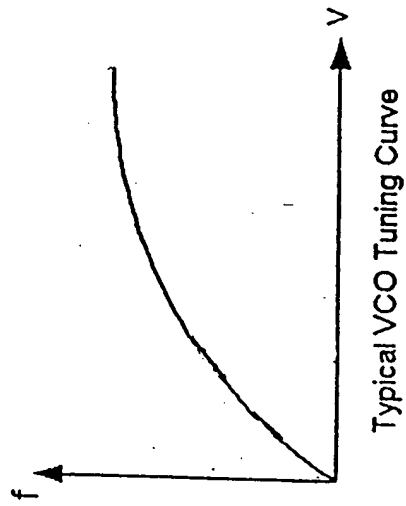


FIG. 36(a)

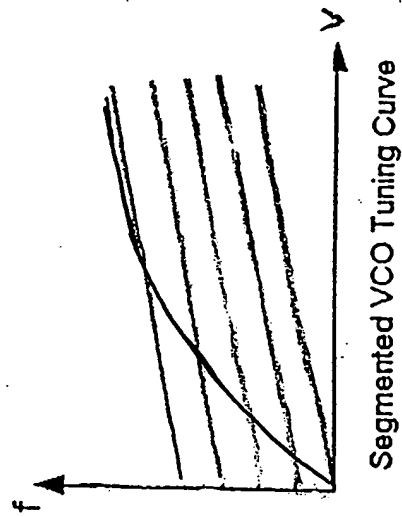


FIG. 36(b)

FIG. 37(a)

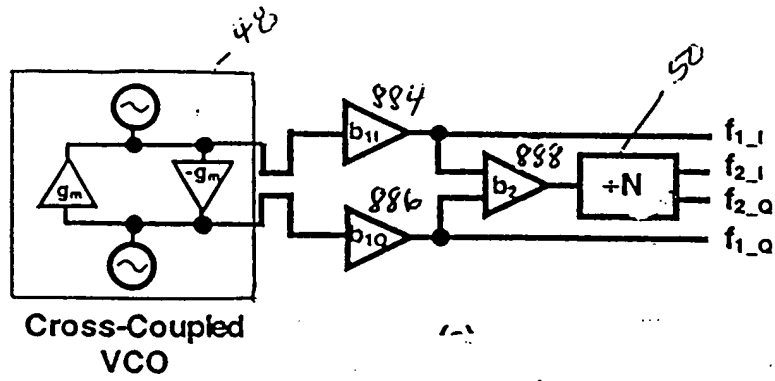
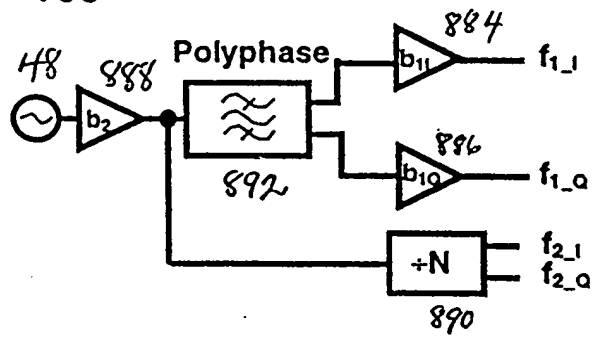


FIG. 37(b)



FROM  
EXTERNAL  
PROCESSING  
DEVICE

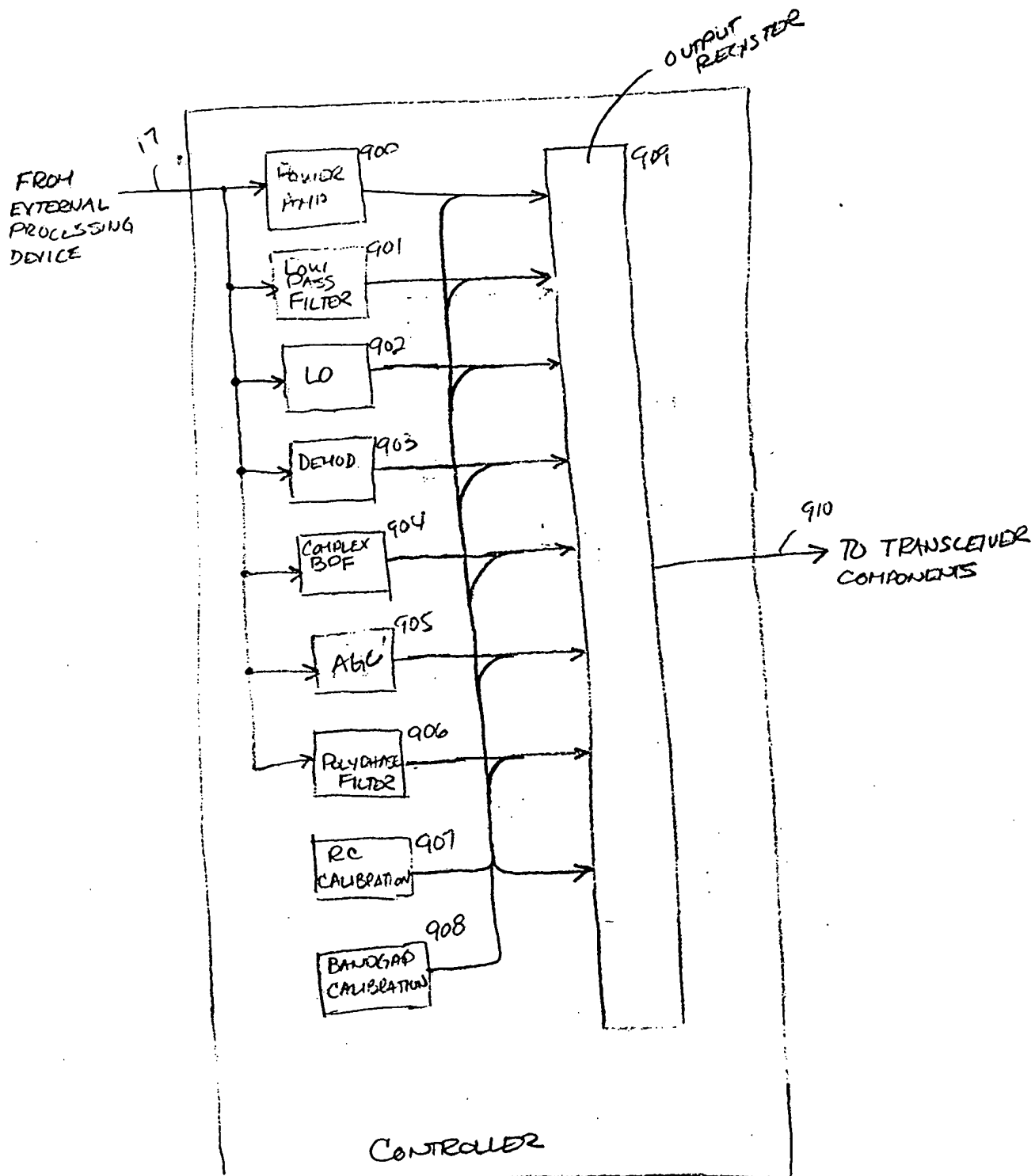


FIGURE 38



202207 04060900

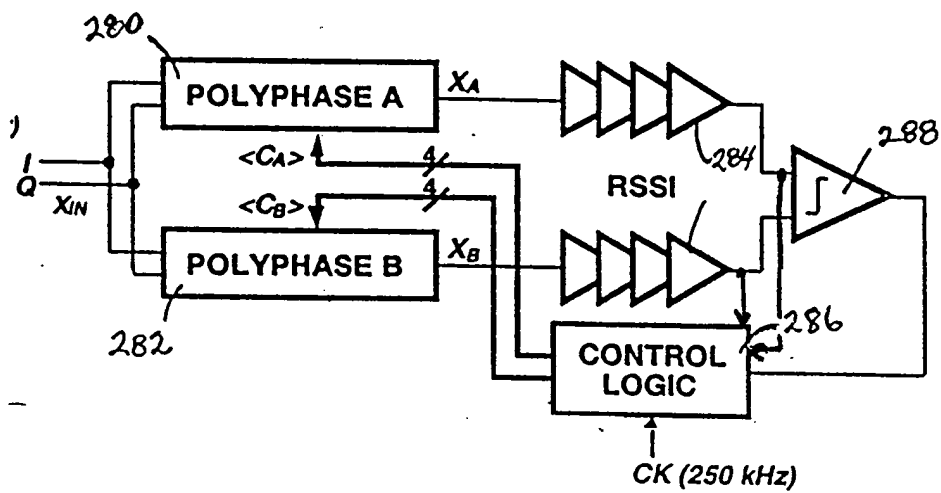


FIG. 40



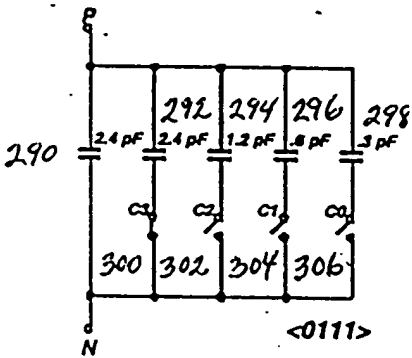
[illegible]

FIG. 41

002201 0406560

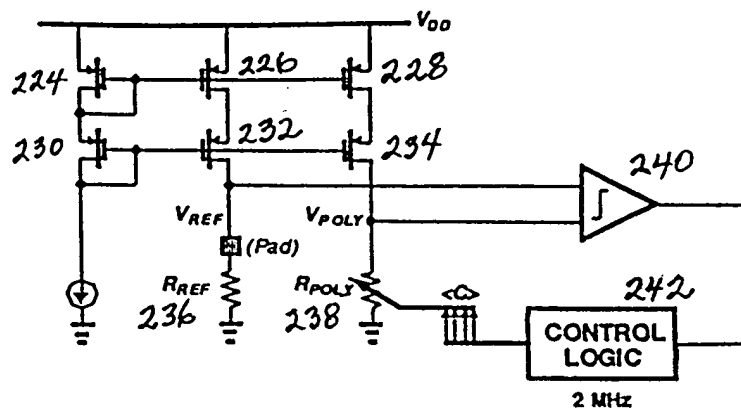


FIG. 42

602,007,000,000

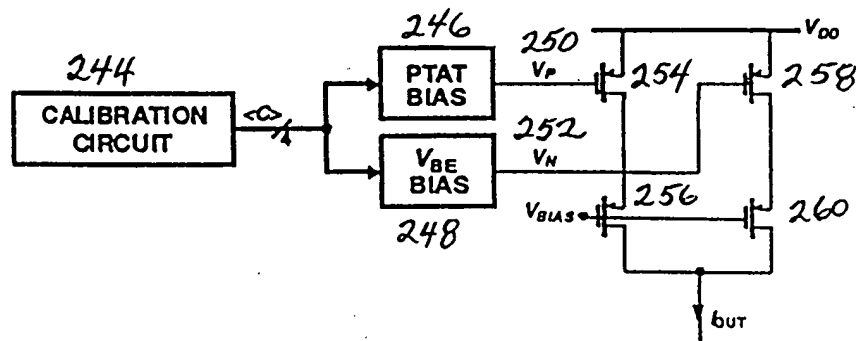


FIG. 43

002207 0106560

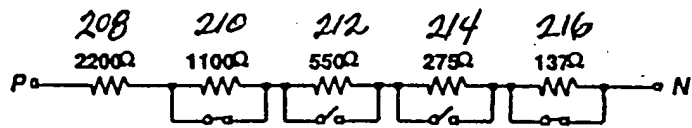


FIG. 44

**THE**

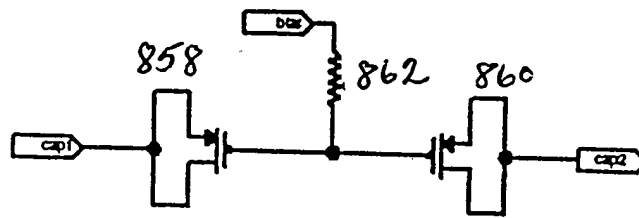


FIG. 45-

Hand-drawn schematic diagram of a two-stage amplifier. The first stage is a common-emitter amplifier with a 622 ohm collector resistor, a 624 ohm emitter resistor, and a 634 ohm base resistor. The input is coupled through a 642 ohm capacitor. The output is coupled through a 644 ohm capacitor to the second stage. The second stage is a common-emitter amplifier with a 650 ohm collector resistor, a 652 ohm emitter resistor, and a 646 ohm base resistor. The input is coupled through a 648 ohm capacitor. The output is coupled through a 640 ohm capacitor to a 50 ohm antenna. The diagram is labeled with component values and includes a note "LNA (om)".

File # 46

002004 00000000

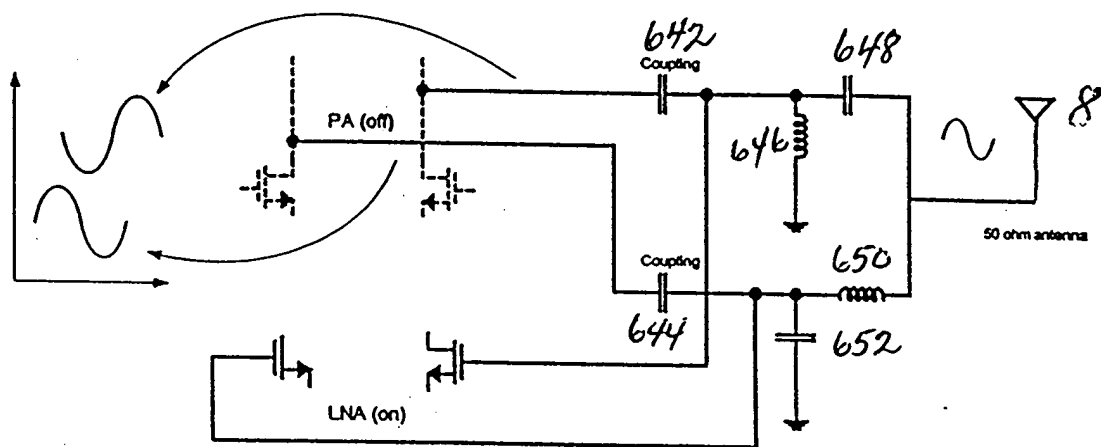


FIG. 47

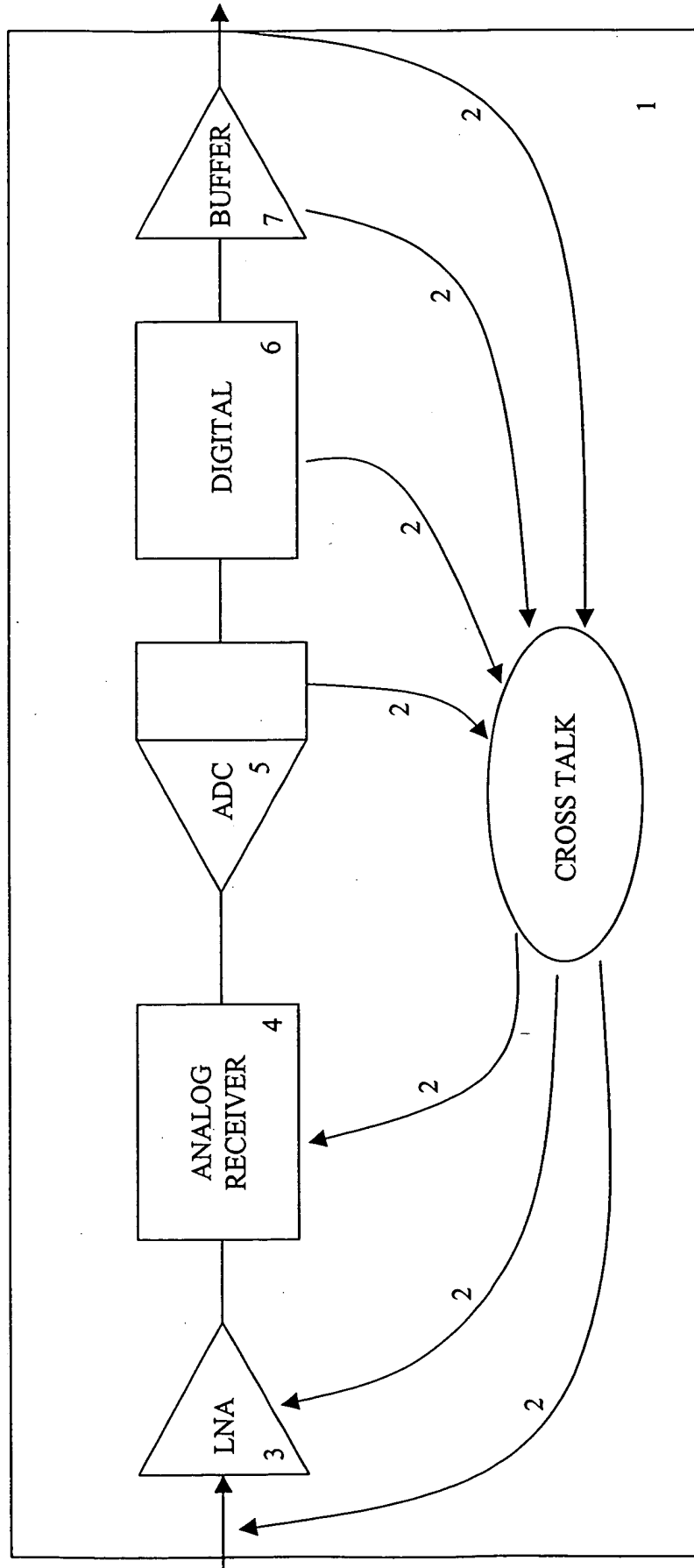


FIG. 48a



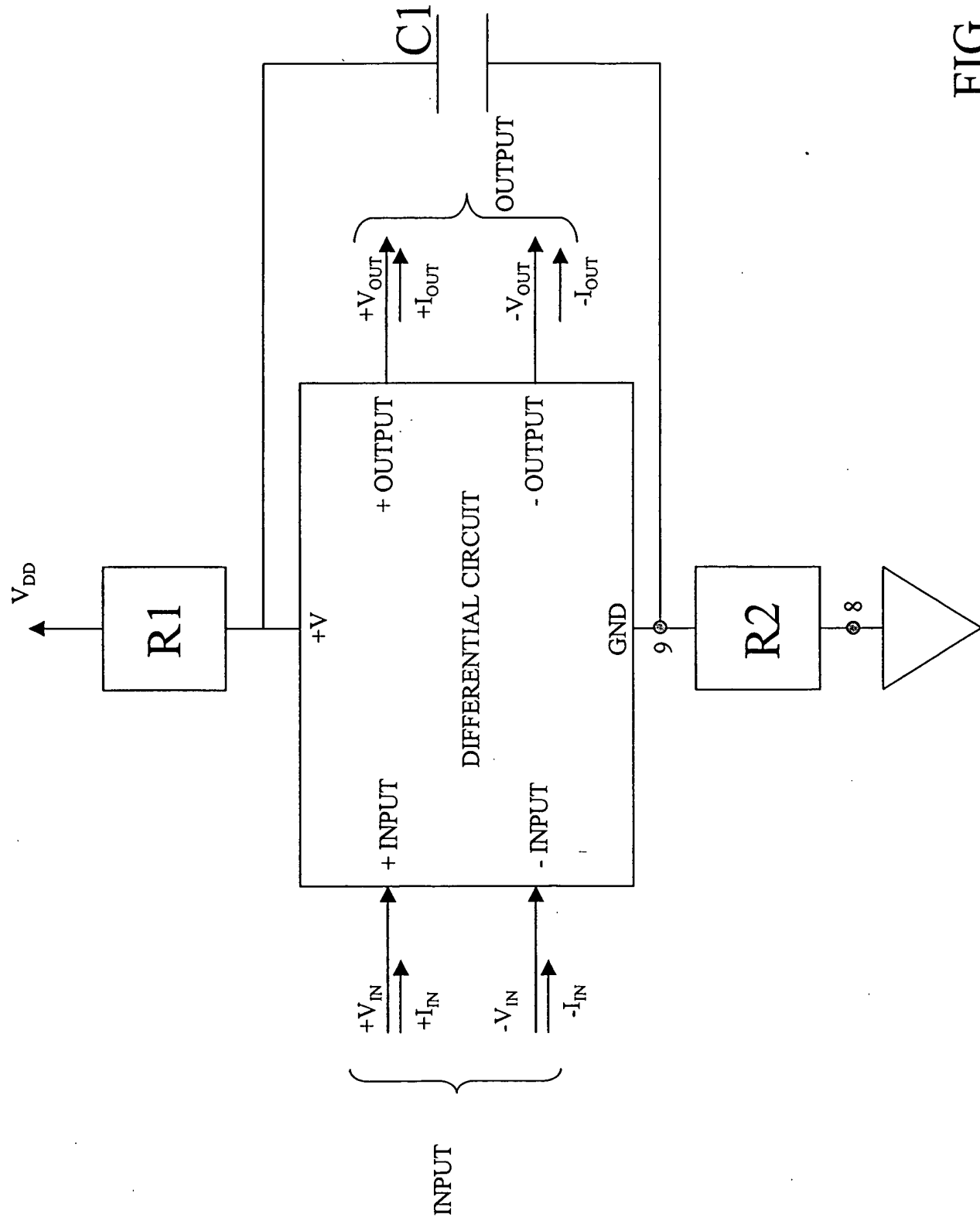


FIG. 406



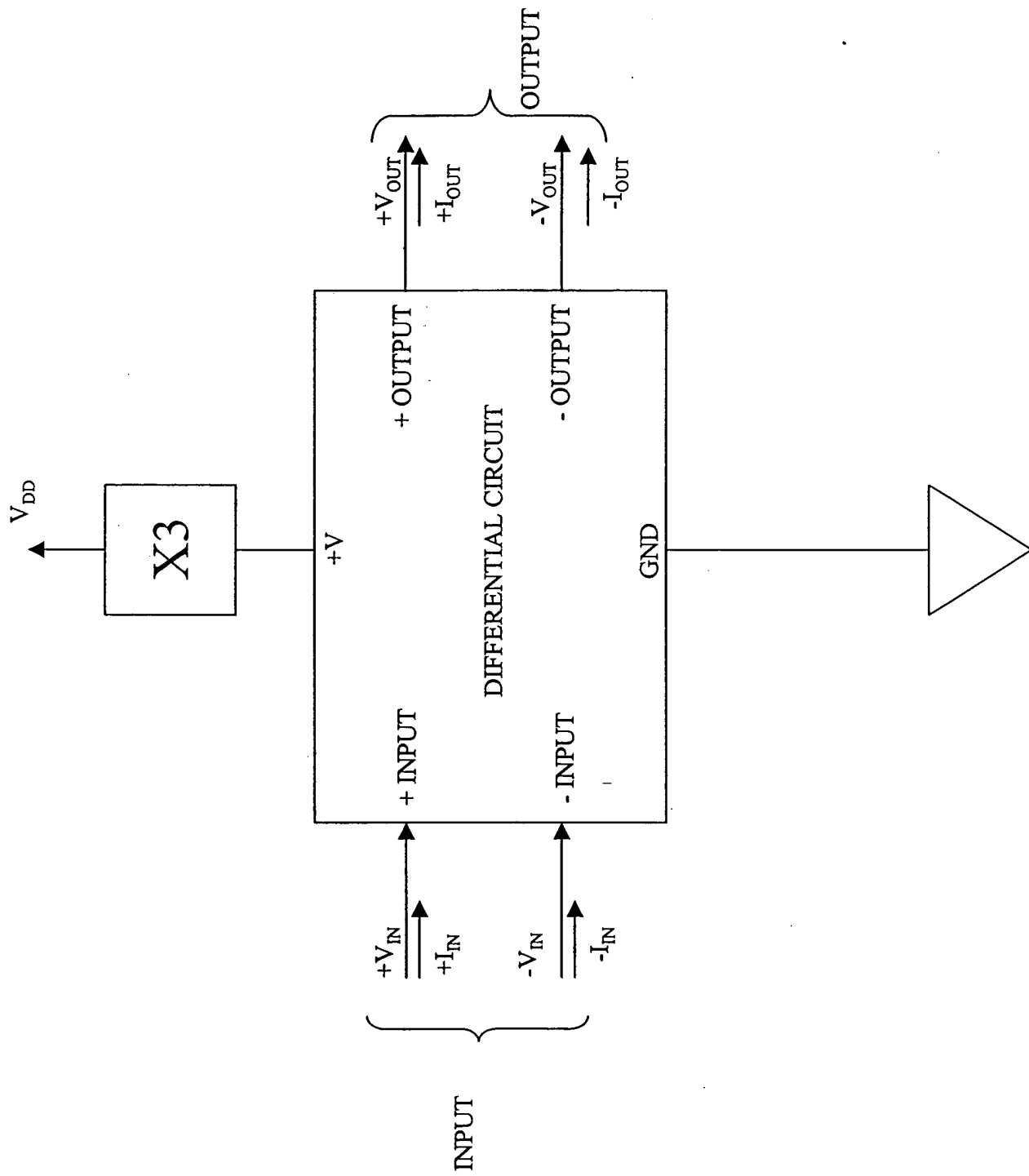


FIG. 48d

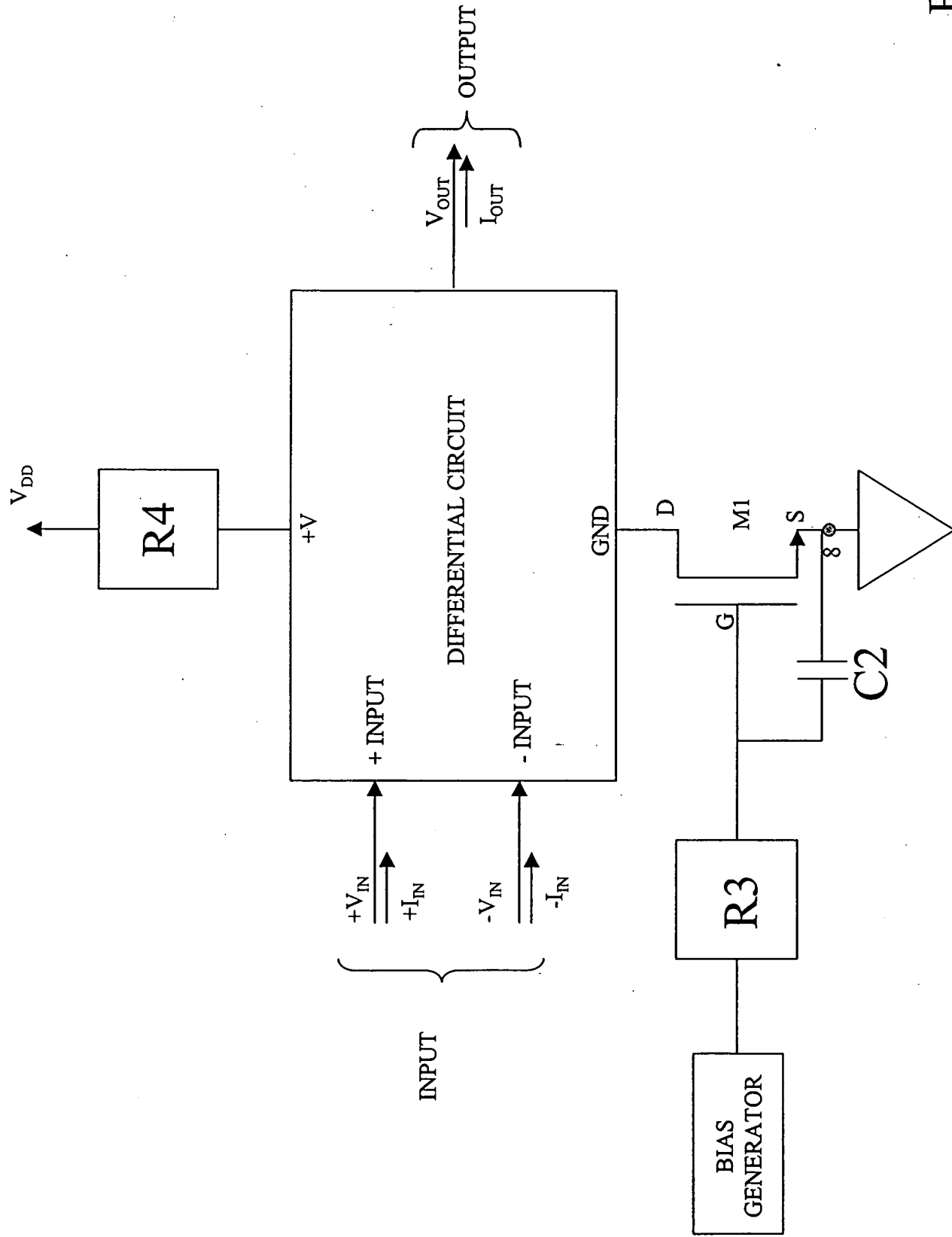


FIG. 48e

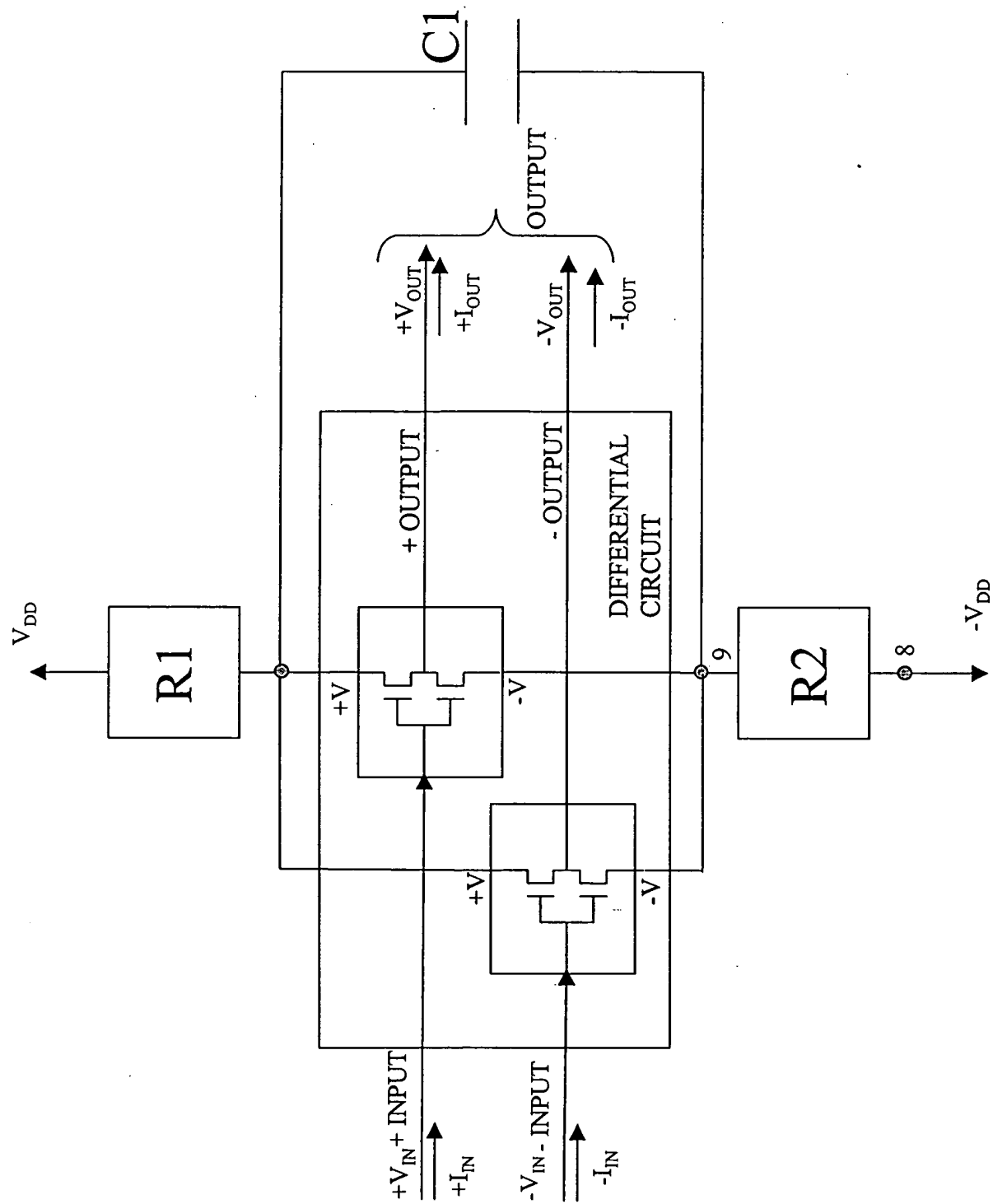


FIG. 48f